

DOCUMENT RESUME

ED 201 074

EC 132 499

AUTHOR Ritchie, Shirley, Ed.
 TITLE Project ASCENT: Mainstreaming Gifted and Talented in Early Childhood.
 INSTITUTION North Carolina State Dept. of Public Instruction, Raleigh. Div. for Exceptional Children.
 SPONS AGENCY Office of Education (DHEW), Washington, D.C. Office for Gifted and Talented.
 PUB DATE 77
 NOTE 104p.
 EDRS PRICE MF01/PC05 Plus Postage.
 DESCRIPTORS Class Activities; Community Resources; *Curriculum; Early Childhood Education; *Gifted; *Mainstreaming; *Parent School Relationship; Program Descriptions; *Program Evaluation; Resource Teachers; Staff Development; Talent; *Talent Identification; Teacher Attitudes
 IDENTIFIERS *Project ASCENT

ABSTRACT

The manual describes Project ASCENT, a North Carolina project to provide support services to help early childhood teachers provide a differentiated curriculum for identified gifted children in the regular class. The chapter on program implementation considers such aspects as project goals, staff, funding, schools involved, the duties of the program director and the support teacher, and resources. The brief chapter on identification of gifted and talented students contains the North Carolina definition for gifted and talented children, a summary of the identification procedure, and questions for the children's interview. Staff training is considered in the third chapter which includes sections on goals of the project training program, both the inservice and University training programs, methods and activities used in inservice training, and the materials resource room. The longest chapter is on the curriculum and provides a brief description and lists of readings for the basic curriculum, the affective curriculum, the creative curriculum, and the differentiated curriculum. Sixteen specific curriculum activities are described, including making a terrarium, bookmaking and binding, studying micro organisms, learning about machines and tools, and appreciating literature and art. Parents and the community are discussed in Chapter 5 which includes information on using parents as resources, form letters used, and activities including camping and learning living history. The final chapter describes the evaluation component being used in the project which includes comparison with control schools to determine changes in teacher attitudes and teacher perception of students' gifts and talents. (DB)

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Project ASCENT
Mainstreaming Gifted and Talented
in Early Childhood

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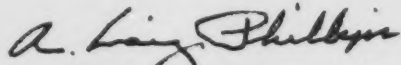
Issued through
Division for Exceptional Children
State Department of Public Instruction
Raleigh, North Carolina
1977

EC 132499

FOREWORD

Since 1961, the State of North Carolina has had a commitment for quality educational service to its gifted and talented children when the General Assembly, the Governor's Office, and the Department of Public Instruction began a cooperative effort to fund programs for this population. Local educational agencies have used these state funds to implement programs. Through the years both State Agency and local educational leadership have worked to enlarge program offerings. As additional resources have been made available, more children have received service. However, eligible students have exceeded available funds. State Board of Education response was favorable when some federal funds became available in 1976 as a way not only to serve an unserved population but also to develop an early childhood model with replication potentials.

This manual is a product of our Federal Grant which demonstrates step-by-step the procedures followed in offering service in a "mainstreamed" approach. I encourage careful perusal of the publication as a service delivery option.



A. Craig Phillips
State Superintendent of
Public Instruction

PREFACE

Throughout North Carolina interest in gifted child education continues to grow. In the 1975-76 school year, 36,434 identified gifted and talented students, almost none of whom were below grade four, were receiving service in the public schools. During this period of time the General Assembly passed the Equal Educational Opportunities Act which called for full service from kindergarten through grade twelve. Although millions of state dollars were going into programs for the gifted and talented each year, many children were unserved, especially at the early childhood level.

The Congress appropriated \$2,560,000 for gifted and talented projects for 1976-77 for the whole country. State Agencies could apply for a share of these funds. The Division for Exceptional Children's Gifted and Talented Section wrote a project at the early childhood level to try to develop a way of serving this population. The division director, Theodore R. Drain, and the Section staff felt that this age group was most adaptable to mainstreamed concept within the state "least restrictive alternative" placement. Students were to be identified by State gifted and talented criteria yet remain within regular heterogeneous classes. A new role, that of a Support Teacher, was developed to work primarily with the regular classroom teacher having the identified children themselves. The Support Teacher would help the regular teacher in differentiating the gifted children's curriculum. A strong staff development component was included for both regular and support teachers. This component was comprised of in-service and/or university coursework.

The project was approved by the United States Office of Education's Office of Gifted and Talented at a reduced funding level which created many of the concerns and stresses within the project during the year. The State Agency allocated the funds to the involved three administrative school districts, ones typical of the state. An Advisory Council was appointed by the State Board of Education, staff was employed, and the project was underway by the opening of the 1976-77 school year. This manual fulfills one of the project objectives. Interested persons from all parts of the nation have watched this project and are anticipating the manual.

Special appreciation must be expressed to Mr. Jimmie E. Martin, superintendent of Stanly County, Dr. H. T. Webb, Jr., superintendent of Albemarle City Schools, Mrs. Betty Stovall and Dr. Charles Hickman of Charlotte-Mecklenburg Schools, and Dean John Chase of the University of North Carolina at Charlotte and all of their staff members and teachers who have so warmly supported the project. Without their leadership and help and that of Mr. Drain, Shirley Ritchie and the three Support Teachers they could not have accomplished what they have. This was a truly three pronged effort: State Agency, local administrative agency, and university.

Cornelia Tongue
Project Director

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FLIGHT PLAN

CHAPTER I

IMPLEMENTATION

Project ASCENT

Project ASCENT advocates that services be provided in the mainstream of education through the cooperation of classroom teachers and project personnel. It is being developed to promote academic, social and creative environments for nurturing talents in early childhood. The primary goal of the project is to help teachers discover and develop their abilities to enrich and expand learning opportunities for their gifted and talented students. Establishing trust and rapport between all those involved and winning the understanding, confidence and support of the community are considered essentials in reaching the goal. The project fills an educational and programmatic void in programs for gifted and talented children in North Carolina and is funded to develop a model to be shared with all school systems in the state and other states when desired. Project ASCENT is sponsored jointly by the State Department of Public Instruction, The University of North Carolina at Charlotte, the Albemarle City Schools, Charlotte-Mecklenburg Schools and Stanly County Schools.

The Rationale

Project ASCENT is a program for gifted and talented children in early childhood, and is based on the premise that all children may possess some talent which is worthy of recognition and development.

In its broadest sense, talent can be considered to exist in every human activity (Getzels & Dillon, 1973). The problem of defining the specific talents to be recognized and of selecting who is to be regarded as talented are not yet solved to everyone's satisfaction. De Haan and Havinghurst (1961) list categories of intellectual ability, creative thinking, scientific ability, social leadership, mechanical skills, and talents in fine arts. C. W. Taylor (1968) categorizes talents into academic, creative, communication, planning, forecasting, and decision making.

The similarity in these listings is apparent but it is obvious there are other legitimate talents which are valuable to society and worthy of discovery and encouragement.

The talent to love, to understand, to empathize and to be of service are socially useful and discernible and, therefore, should be included (Getzels & Dillon, 1973).

Due to the developing nature of the young child, all children will be considered participants in the ASCENT program of nurturing in a responsive environment. The responsive teacher is the indispensable agent in the process of encouraging the child to express his/her idea, to evaluate it according to his/her criteria and to modify and redefine it. The teacher can protect the child from unnecessary criticism by creating an accepting classroom atmosphere. The role of the responsive teacher requires different skills from those traditionally associated with teaching, such as those of giving information, punishing, praising and controlling (Torrance & Myers, 1973). The role of the support teacher is one of close collaboration with the classroom teacher in developing a responsive climate for growth. He/she will encourage the teachers and children, help develop innovative material for differentiation and expansion of the curriculum, involve outside resource people in the school program, provide information to the community regarding the project and facilitate the development of a team spirit among the staff.

For the purpose of research, there is an identified gifted and talented population of 10 percent of the children. Identification measures include private interviews, anecdotal records and a scale for measuring: learning, creativity, motivation and leadership. Ten percent of the control school population are identically identified with post measures determining growth. However, the central focus is on each individual child who is recognized as an active personality engaged constantly in transactions with the classroom environment, peers, and outside sources of influence. The primary focus is on the process of learning - developing an understanding of the structures which underlie all forms of knowledge (Wickens, 1973).

Although the format remains the same, there is a continual reorganization of curriculum and restructuring of the environment as needs of individuals are assessed and allowance is made for individual interests and rate of progress. The teacher becomes a facilitator of learning, not the imparter of information. This role requires a mutual respect between the teacher and the child and a recognition that the child is a worthy being capable of making significant decisions concerning his/her own learning and of making a contribution to the learning community.

The curriculum includes opportunities for expression of feelings and successful interaction with others for development of the total child - a whole human being, not a hollow one - a human being who is able to think well and feel deeply. New findings in research tell us that more emphasis must be placed on unifying all aspects of the intellect. Education must have as much concern for sustaining and bolstering children's self-concepts as for their accumulating or understanding knowledge itself. The children want and need knowledge that is relevant and has personal meaning for them. The learning environment which accounts for the creative aspects and values of a person is crucial and makes the real difference in whether he or she is truly educated (Williams, 1972).

In order not to limit the possibilities of growth open to the child, the curriculum is expanded into the community. Significant others in the child's life are enlisted to enhance and stimulate the child to develop fully. Parents are partners with the school in development of their child's intellect, emotional life and talents. The parents need to be a part of the decision making process concerning their child's future.

The children are encouraged to explore an interest and expand it to many areas of growth. For instance, an interest in animals may lead to keeping a small animal in the classroom. Observation and recording skills are learned through studying the animal's behavior, responsibility is taught by caring for it and social skills are developed through the sharing and interaction which takes place in these activities.

To develop leadership in children, it is necessary to keep them in touch with all aspects of society. In order that they not become authoritarian or oppressive, they must learn not to manipulate but to be responsive to the needs of others. In the reality of a classroom with a normal distribution of children, they can learn to appreciate the contributions of all people to the group and the values inherent in democracy. A guidance program to teach these values is a necessary part of the program.

It is recognized that the expertise necessary to fulfill all the goals of the program does not reside in every teacher and administrator. A program of in-service training is essential to retrain teachers and administrators in a new model, to teach interpersonal skills necessary for administrators, classroom teachers, and support teachers

to work together successfully, and to provide ideas and materials for creative development of the curriculum. The implementation of a successful in-service program means a commitment of teachers and administrators to an open-minded, flexible and cooperative spirit of growth. Administrative support is vital in developing and keeping alive this spirit.

Project ASCENT is an ambitious venture of commitment to the individual needs of children. Its success requires the cooperative functioning of all people involved.

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The Goals

First Year Goals and Objectives. The following were implemented in the year 1976-77.

1. To establish early childhood gifted and talented program models in urban, rural, and small town settings by reorganization of the learning environment to be more responsive to individual needs of children.

Objectives:

- a. by June 1977, children will make significant decisions concerning their own learning by engaging in active exploration with many materials and sources of influence in and out of the classroom.

- b. by June 1977, children will make choices in what tasks they will attempt and what materials they will use based on their interests and strengths and proceed at their own rate.
 - c. by June 1977, children will interact with other children and teachers in the environment through expression of thoughts and feelings leading to development of mutual respect and positive self-image.
 - d. by June 1977, children will collaborate and share freely with other children in the learning environments.
 - e. by June 1977, children will grow toward assuming responsibility for their own learning.
 - f. by June 1977, teachers will assume the role of facilitator of learning.
 - g. by June 1977, a research study will be completed to compare growth of project children and control groups.
2. To develop mental, physical, social/emotional, artistic, and leadership talents in children to enable them to grow according to their individual capacity.

Objectives:

- a. by June 1977, individual talents of students will be identified through continuous observation and use of assessment scales.
- b. by June 1977, opportunities for talent development will be provided by allowing the child to explore and interact with available resources in the community.
- c. by June 1977, significant persons outside the educational setting will be involved in the children's development.

3. To install an in-service program leading to teacher and administrator growth in order to fulfill program goals and lead toward certification in gifted and talented education.

Objectives:

- a. by January 1977, teachers will make a personal commitment to an attitude of open-mindedness, flexibility and cooperation in order to explore and attempt expansion of their classroom curriculum in both the cognitive and affective domains.
 - b. by June 1977, teachers will receive training in observation skills and use of assessment scales for identification of multi-talents in children.
 - c. by June 1977, teachers will receive training in learning theory and early childhood curriculum, leading to development of creativity and talents in children.
 - d. by June 1977, teachers will experience personal growth in order to share and interact successfully with others in the learning environment.
 - e. by June 1977, teachers will receive training in psycho-motor development of children.
 - f. by June 1977, teachers will receive training in development of children's self-concept.
4. To promote a gifted and talented program of studies at The University of North Carolina at Charlotte.

Objectives:

- a. by June 1977, two (2) courses of instruction in gifted and talented education will be offered by The University of North Carolina at Charlotte.

- b. by June 1978, a broad-based program of instruction for gifted and talented students will be developed in line with the goals of The University of North Carolina at Charlotte.
- 5. To produce products for dissemination to other local education agencies in North Carolina.

Objectives:

- a. by January 1977, two slide-tape presentations will be available on the total program and an individual school program.
- b. by June 1977, a program manual will be completed for dissemination to all LEA's in North Carolina.

Second Year Goals. The following are the project goals for 1977-78 in addition to those for the first year.

1. To establish an early childhood G & T Program Demonstration Site(s) to be used in teacher training for LEA's within Education District Six and other LEA's requesting service as part of the replication process.
2. To provide a second level of continuity training involving intensive classroom management staff development for teachers and administrators.
3. To involve significant persons in the community who are outside the classroom setting to develop more fully the talents (mental, social, physical, artistic, leadership, etc.) in the identified children.
4. To provide opportunities for the children to explore resource sites in the community outside the school setting.
5. To develop tools of pupil identification.
6. To develop a model Individual Education Plan (IEP) for early childhood gifted and talented children to fulfill the objectives in PL 94-142 and the North Carolina Equal Education Opportunities Act which will include evaluative criteria.

7. To revise the manual incorporating the second year objectives and to disseminate original material.

Project ASCENT Staff

Project Director: Cornelia Tongue, Director, Gifted and Talented Division, State Department of Public Instruction

Program Director: Shirley Ritchie

Consultants: Dr. John B. Chase, Jr., Dean, College of Human Development and Learning, The University of North Carolina at Charlotte

Dr. Eugene Schaffer The University of North Carolina at Charlotte

Henry Johnson, Gifted and Talented Division, State Department of Public Instruction

Henri Fisher, Gifted and Talented Division, State Department of Public Instruction

Betty Stovall, Director, Gifted and Talented Education, Charlotte-Mecklenburg Schools

Dr. Dorothy Sisk, Director, Gifted and Talented Education, U. S. Office of Education

Bob Eberle, author, gifted and talented program materials

Beverly Wood Elementary School, Charlotte-Mecklenburg
Evelyn Crutchfield, principal
Margaret Claiborne, support teacher

Teachers:	Joyce Allen	Laura Gilchrist
	Dee Braxton	Steve Minor
	Libby Cathcart	Ann Thomas
	Carletta Freeman	Vickie Trotter
	Jo Sigmon, media specialist	

Central Elementary School, Albemarle
 Robert Clark, principal
 Lois Staton, support teacher

Teachers:	Julia Barger	Hazelline Ruskin
	Sheila Dennis	Marsha Smith
	Carolyn Gresham	Charity Snider
	Sarah Manning	Christine Snuggs
	Charlotte Morris	Gwen Treece
	Carol Yost	

Norwood Elementary School, Norwood
 W. G. Nelson, principal
 Robbie Floyd, support teacher

Teachers:	Barbara Burleson	Ann Upchurch
	Wanda Carpenter	Joan West
	Minnie Dennis	Gail Williams
	Barbara Foster	Pat Phillips, media specialist

Funding

Project ASCENT is funded by a grant of \$62,000 from the Gifted and Talented Division of the United States Office of Education. All the involved classroom teachers are on regular state allotments and the program director and three support teachers are paid from project funds. In addition to salaries there is funding for consultant fees, travel for project personnel and supplies. Office space and secretarial service for the program director is supplied by The University of North Carolina at Charlotte. Each of the three local education agencies has given supervisory and administrative support.

Advisory Board

The Advisory Board is made up of members from all sponsoring agencies and is appointed by the Director of the Division of Exceptional Children of the State Department of Public Instruction. The Board meets quarterly to receive information and review the status of the project and to make decisions and recommendations. Members of the Advisory Board are:

Dr. John B. Chase, Jr., Dean, College of Human Development and Learning, The University of North Carolina at Charlotte (Chairman)

Ted Drain, Director of Exceptional Children Division, State Department of Public Instruction

Cornelia Tongue, Director of the Gifted and Talented
Division of the State Department of
Public Instruction

Betty Stovall, Director of Gifted and Talented Edu-
cation, Charlotte-Mecklenburg Schools

Jimmie Martin, Superintendent of Schools, Stanly
County

Toby Webb, Superintendent of Schools, Albemarle

Dean Koulouris, Director of Exceptional Children
Division, Region VI, State Department
of Public Instruction

Collaboration with The University of North Carolina at
Charlotte

The staff of Project ASCENT has worked closely with the faculty of the College of Human Development and Learning of The University of North Carolina at Charlotte. The program director is housed at the University, serves on a task force of the faculty and attends faculty seminars.

The Dean of the College of Human Development and Learning serves as a consultant and as the Chairman of the Advisory Board. A faculty member with a doctorate in gifted and talented education serves as consultant and assisted in every phase of the project. He designed the research component, helped develop the rationale and goals, conducted in-service training for the staff, and consulted frequently with the project personnel. Other faculty members assisted in developing a slide/tape presentation and in teaching courses.

In accordance with the goals of the project, a course of study in gifted and talented education was initiated at the University. Two courses were instituted and the enrollment rose from thirteen students the first semester to forty-two students the second semester. The program director assisted in teaching these courses.

During a week-long seminar, "The Week of the Young Child," when all other classes were suspended in the College of Human Development and Learning at the University, the project provided a speaker and erected an elaborate display.

Services to Children and Teachers

In order to comply with the North Carolina Equal Educational Opportunity Act and Public Law 94-142, which call for providing services to exceptional children in the "least restrictive alternative," Project ASCENT is designed to provide needed services in the regular classroom with support to classroom teachers and children from project personnel. The services to children are offered in heterogeneous classes which are considered to be the most desirable environments for their total development. Since the regular classroom teachers are with the children the most and know them the best, they are considered the key adults in meeting educational needs. They may call upon supportive service personnel when they need help with a child's needs. The chief emphasis of the project is to provide support and training to teachers in enriching and expanding learning environments.

Schools Involved

Central Elementary School is a kindergarten through sixth grade school of 500 pupils in Albemarle, a small community of 25,000 population located in Stanly County. The school is in the heart of town in an established middle class neighborhood. The students are mostly from middle class families with 26 percent of them being black. All eleven K-3 level teachers chose to participate in the project along with the support teacher.

Norwood Elementary School is a kindergarten through sixth grade school with a total population of 700 pupils. It is located in Norwood, a small township of 500 population surrounded by farmland. Children are mostly from middle to lower class economic status with 20 percent of them being black. There are two kindergarten teachers, four first grade teachers, one second grade teacher, a media specialist and the support teacher serving in the project.

Beverly Woods School is located in Charlotte, a large city of 350,000 population. The school is a kindergarten through third grade school with 550 pupils. It is located in an upper-middle class neighborhood and serves white pupils from the surrounding area and 35 percent black pupils bused from a low to middle class neighborhood twelve miles away. Eight classroom teachers, a media specialist, a special education teacher and the support teacher served in the project.

The Duties of the Program Director

1. Act as liaison among the three Local Education Agencies (Stanly County, Albermale City and Charlotte-Mecklenburg), the target school, The University of North Carolina at Charlotte, the Division for Exceptional Children and Cornelia Tongue, Project Director, State Department of Public Instruction.
2. Supervise the activities of the three support teachers in cooperation with each Local Education Agencies supervisor (principals, supervisor) selected by each of the superintendents to enable them to work with the regular teachers.
3. Assume responsibility for inservice activities of the regular teachers in the target schools and the continuity training (monthly continuing inservice)--in cooperation with The University of North Carolina at Charlotte staff and the exceptional children's regional coordinator.
4. Coordinate development and/or selection of instruments/measures of identifying the eligible children and supervise the identification/placement procedures in the target schools per the Rules Governing Programs and Services for Children with Special Needs.
5. Cooperate upon call with The University of North Carolina at Charlotte in one gifted and talented course each semester.
6. Be housed at The University of North Carolina at Charlotte.
7. Work with support teachers and regular teachers in helping the latter develop and use relevant teaching strategies to bring a differentiated curriculum to the identified children while helping the children in regular classes.
8. Help the involved teachers to recognize and develop multiple talents (academic, creative, productive thinking, leadership, artistic, psychomotor) in the identified children.
9. Gather data on target children and the selected control group to provide project evaluation (pupil growth in affective and cognitive areas) to show that project has had impact on children.

10. Report quarterly to the Director, Division for Exceptional Children, the Project Director and the Advisory Council.
11. Prepare project publication/model for duplication and dissemination to show how the project can be replicated in North Carolina and other states.
12. Work with the Stanly County Schools business manager under the direction of the superintendent in purchasing instruments/books/materials, employing staff development specialists, purchasing office supplies, getting bills paid, duplicating publication/model all within the budget. Items in the budget in this area called "Other Expenses" can be shifted without approval from the USOE.
13. Explain the project to interested parties.

The Duties of the Support Teacher

1. Be assigned a target school or schools and assist the Director in setting up and implementing the project.
2. Participate in the activities of the inservice program designed by the Director and assist the Director with these activities.
3. Help the Director in selecting measures of identification and help the regular teachers in identifying and placing the eligible children per the Rules Governing Programs and Services for Children with Special Needs.
4. Work primarily with your target regular teachers in helping them develop and use new teaching strategies to differentiate the curriculum to meet the needs, activities and talents of the identified children.
5. Assist in the data collection and development of the publication/model to validate the project.
6. Explain the project to parents and teachers upon call.
7. Be employed by a particular Local Education Agency and be responsible to that school system but work under the direct direction of the Director and the superintendent's supervisors (principal, supervisor).

The Role of the Support Teacher

The project requires a resource teacher who works closely in a mainstreaming environment necessitating a new role from the resource teacher who conducts a small class of special students. The ASCENT resource teachers have been renamed support teachers to emphasize this new role. They are to be supportive of the classroom teachers, teaming with them to implement services to the gifted and talented students. The emphasis is in the development of services to regular classroom teachers with the responsibility of delivering the services to students resting with the classroom teacher who is assisted by the support teacher.

The new role of the support teacher requires human relations skills which must be shared by the classroom teacher. There is no way two people can work together effectively without cooperation, openness and willingness to share and explore each other's goals and ideas. There should be clearly defined expectations on the part of each team member. Many of the teachers in Project ASCENT possessed these skills and willingness but some did not. Having worked only with children, they found it difficult to work with another adult. The support teacher was expected to perform duties unrelated to her job on the request of the classroom teacher or take the children receiving the services out of the classroom. Some teachers felt uncomfortable with the support teacher in the classroom since this was a new experience for them. Support teachers had to possess an abundance of patience, understanding, calmness and firmness to deal with the unrealistic expectations placed on them. There was the criticism from some classroom teachers that the support teacher did not have equal responsibilities and duties or had not been much help. Since the support teacher was working with at least seven other teachers, this criticism represented a distorted view of what she could accomplish.

At least one-half of all in-service training for teachers was of the personal growth nature. Those who resisted this training needed it the most. Most, however, came to understand the role of the support teacher. Others did not change and asked to be removed from the project and their request was granted.

Resources for Program Implementation

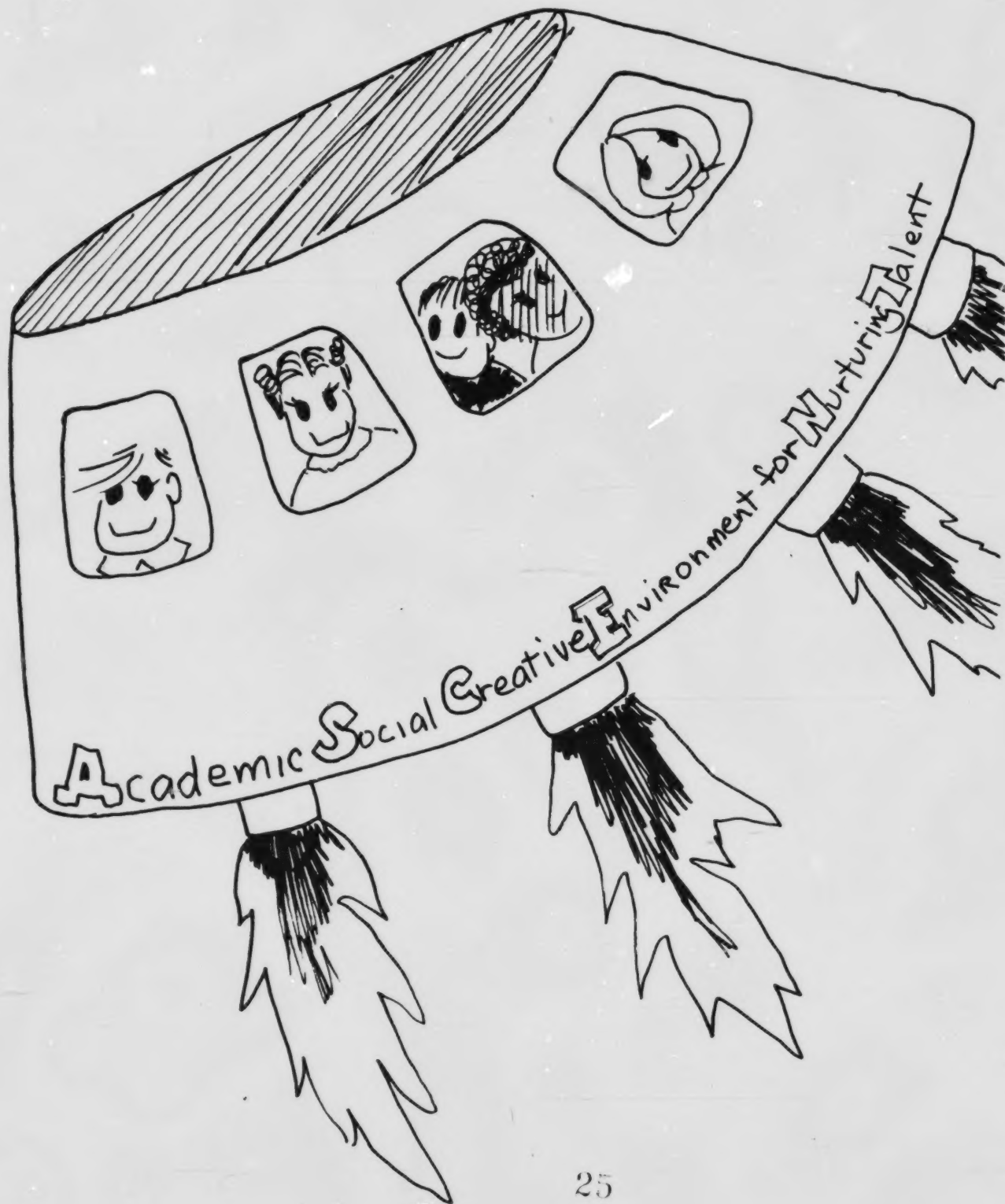
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PASSENGERS



CHAPTER II

IDENTIFICATION OF GIFTED AND TALENTED STUDENTS

North Carolina Definition for Gifted and Talented Children.
(Adopted by the State Board of Education, July 10, 1975.)

A child who is gifted and talented is one who falls within the upper 10 percent in the total school district on intelligence tests, achievement tests, and/or scales that rate behavioral characteristics. This child has academic talent and generally performs above average in his/her classwork and/or may demonstrate a special talent and generally performs above average in his/her classwork and/or may demonstrate a special talent in areas such as creativity, communication, leadership, decision making, forecasting and planning as indicated by the use of behavioral scales and checklists. Consideration must be given to the ethnic composition of the pupil population.

Identification Procedure

A case study approach was used in identifying 10 percent of the total population of children in each project school. Teachers were instructed in the characteristics of gifted and talented students and taught to administer the Renzulli-Hartman Scale for Rating Behavioral Characteristics of Superior Students (Renzulli, 1976). They then completed this scale in the first three months of school for six students in their classroom whom they believed to be the most superior.

The children were then interviewed using questions developed by Dr. Roberta Riley of The University of North Carolina at Charlotte. The questions pertained to the child's relationship to teachers and other pupils and the activities they did or desired to do in school. From this group of 120 pupils, sixty were selected as the core group for research purposes - twenty from each school. In some cases it was necessary to ask the teachers to fill in additional scales to balance the black/white ratio in the sample group. (If the population of the school was 65 percent white and 35 percent black, this was reflected in the

core group.) An equal boy/girl ratio was assured and at least one pupil selected per teacher for the core group. Within these constraints, the core group was selected at random from the nominations.

Since teachers were asked to complete the identification scales early in the year, many expressed the feeling that they had selected inappropriate children and had not selected some who later exhibited special abilities.

If the child's identified talent was academic, I.Q. and achievement scores were recorded when they were available from school testing. Anecdotal records were kept to reinforce identification of other talents. Parents were asked to describe their children's special abilities and interests. As other children emerged with gifts and talents, they were included in services when appropriate.

Identification in the Mainstream

Project ASCENT is a multi-talent development program which leaves a broad range for identifying children's special abilities. Being a mainstream program with emphasis on many facets of child development, it is not possible to "cleanly" identify a group and ignore others. Through observation of the children involved in many activities, it becomes evident that a large majority possess talents in some area to be served by the project - academic, leadership, artistic, creative, productive thinking, psycho-motor.

In this broad concept of giftedness, the whole child needs to be studied and many sources utilized. Both subjective and objective information is needed with the teacher holding the key position in the identification process. Project ASCENT is primarily a teacher-training program because of the teacher's importance in identification and provision of services.

Identification in Early Childhood

Due to the evolving, developing, rapidly changing nature of the young child, it is very important that the adults be open-minded in their assessment of abilities. What was not evident yesterday, may emerge today. Many children do not have adequate experiences prior to school to develop talent - their talents are "latent" waiting for a variety of experiences and media of expression to become "real." When this variety exists, performance becomes the best basis for identifying giftedness. They must be closely

Project ASCENT
1976-77
Instruments of Identification

Renzulli-Hartman Scale for Rating Behavioral Char- acteristics of Superior Students	Child Interviews	Piaget Develop- mental Test	Psychomotor Scale	Standardized Achievement (Instruments Used in Indi- vidual Schools)	Anecdotal Records	Parent Comments
1. Learning 2. Creativity 3. Motivation 4. Leadership	1. Self-Concept 2. Interest 3. Peer Rela- tionships 4. Teacher/stu- dent Rela- tionships	Assesses stage of development in: Conservation of Length Number Quantity Classification Numerousness Seriation	1. Body Aware- ness 2. Swimming 3. Gymnastics 4. Spacial Aware- ness 5. Dance	1. Reading 2. Math 3. Language 4. Science 5. Social Studies 6. Total Battery	Recorded by teachers of activities of GT students	Solicited by requesting information on child's special abilities and interests

Standardized achievement score, anecdotal records and parents' comments were used as supplementary information for identification and documentation of student's behavior.

observed in a variety of settings - academic, social, creative, physical activity and areas of special talents such as art, music, mechanics, science and writing. Creative potential exists in most young children and adults should be alerted to the "symptoms" of creativity in order not to suppress this natural talent. To produce creative work the urge to create must be nurtured through a stimulating, accepting environment.

Children's Interview

1. Tell me all you can do in your classroom.
 - a. How do you spend your time in the classroom?
 - b. What are the things you really like to do in the classroom?
 - c. How do you get started on these things?
 - d. What happens when you finish one of these things?
 - e. How do you know if you have done a good job or not?
 - f. Are there things--activities and work--that you do that other students don't do?
2. What does the teacher in your classroom do?
 - a. When do you talk to the teacher? What do you talk about?
 - b. Is there time to ask the teacher questions that you have? Is it hard to ask the teacher questions? Why or why not?
 - c. Does the teacher help you? When does he/she help you? How does he/she help you? Does the teacher ever help you with anything besides your schoolwork?
 - d. What is your teacher doing now that you would like him/her to stop doing? What would you like him/her to start doing that he/she doesn't do now?
3. Do you ever work with other students?
 - a. Do you ever help other students in the class? How? Do other students ever help you?
 - b. What do you do together?
 - c. How does it help you to work with other students?
4. The classroom specifics.
 - a. Is there something you would like to do that you haven't done yet? Why haven't you been able to do that?
 - b. Tell me something you would like to know more about. Could you do it in this classroom? How would you go about it? What things in your room might help you? How would the teacher help you?
 - c. Tell me what a project is? Name some projects that go on in this room. How do they get started? What projects have you done? Do you like doing projects?

- d. Can you bring in things to the classroom from outside of school? Do you ever do that? What have you or others brought in? What happened after you brought it in? Did you do anything with it?
- e. What are some things you can't do in this classroom? How do you feel about that? Is there something you would like to do that you can't do?
- f. How would you make your classroom different? Why? Could you change it? How would you go about it?
- g. Are there times when you don't want to come to school? Why?
- h. Is your classroom different from last year? How?
- i. Do you feel you are learning something?

CREW

BRIEFINGS

Observation
Identification
Program Planning
Parent Involvement
Creativity
Self-Concept
Talents
Evaluation



CHAPTER III

STAFF TRAINING

Project ASCENT In-Service Training Program

All teachers in the project participated in at least thirty-six hours of formal training in addition to monthly staff meetings. Many teachers completed independent study programs by reading, attending conferences, and optional training sessions materials. As the year progressed, more emphasis was placed on independent programs for teachers designed around their needs and interest. They were kept informed of all early childhood and gifted and talented courses in their area. Seven staff members enrolled in University courses during the year.

Goals of Project ASCENT Training Program

1. To install an in-service program leading to teacher and administrator growth in order to fulfill program goals and lead toward certification in gifted and talented education.

Objectives:

- a. by January 1977, teachers will make a personal commitment to an attitude of open-mindedness, flexibility, and cooperation in order to explore and attempt expansion of their classroom curriculum in both the cognitive and affective domains.
- b. by June 1977, teachers will receive training in observation skills and use of assessment scales for identification of multi-talents in children.
- c. by June 1977, teachers will receive training in learning theory and early childhood curriculum, leading to development of creativity and talents in children.

- d. by June 1977, teachers will experience personal growth in order to share and interact successfully with others in the learning environment.
 - e. by June 1977, teachers will receive training in psycho-motor development of children.
 - f. by June 1977, teachers will receive training in development of children's self-concept.
2. To promote a gifted and talented program of studies at The University of North Carolina at Charlotte.

Objectives:

- a. by June 1977, two courses of instruction in gifted and talented education will be offered by The University of North Carolina at Charlotte.
- b. by June 1978, a broad-based program of instruction for gifted and talented will be developed in line with the goals of The University of North Carolina at Charlotte.

Project In-Service Training (Required)

"Identification of Gifted and Talented Students"

Dr. Eugene C. Schaffer, The University
of North Carolina at Charlotte
Two hour session - total staff

"Creativity"

Ms. Henri Fisher, State Department of Public
Instruction
Two hour session - total staff

"Early Childhood Curriculum"

Ms. Jean Owen and Overton Demonstration School
staff, Salisbury
Three day workshop - total staff

"Talent Development"

Mr. Henry Johnson, State Department of Public
Instruction
Two hour session - Norwood and Central staff

"Personal Growth"

Dr. Eugene C. Schaffer, The University
of North Carolina at Charlotte
Overnight retreat - Beverly Woods staff

"Learning Centers"

Ms. Carol Newman, Charlotte-Mecklenburg School
Two and one-half hour session - Beverly
Woods staff

"Developing Self-Concept"

Shirley P. Ritchie, Project Director
Two hour session - Norwood staff

"Elementary Guidance"

Shirley P. Ritchie, Project Director
Two hour session - Central staff

"Multi-Talents"

Betty Stovall, Director of Gifted and Talented
Education, Charlotte-Mecklenburg Schools
One hour session - Beverly Woods staff

"Gifted and Talented Education"

Dorothy Sisk, Director of Gifted and Talented
Education, U. S. Office of Education
One hour session - Beverly Woods staff

"Leadership Skills"

National Academy for School Executives
Three-day session - two support teachers

"Exploratory Art"

Irene Jahns, parent, art educator
One hour session - Beverly Woods staff
Two hour session - Beverly Woods parents

"Gifted and Talented Education"

Dorothy Sisk, Director of Gifted and Talented
Education, U. S. Office of Education
Four hour session - Project director,
support teachers

"Linking Affective/Cognitive Domains"

Frank Williams
Three hour session - Project director,
support teachers

"Identification/Programs for Gifted"

Joe Renzulli
Three hour session - Project director,
support teachers
International CEC Conference, Atlanta,
Georgia

"Governor's School for Gifted Students"

Paul Torrance

Two hour session - Project director,
support teachers
International CEC Conference, Atlanta
Georgia

"Identification of Gifted and Talented"

Cornelia Tongue, N. C. Director of Gifted
and Talented Programs

One hour session - Project director,
support teachers

"Teaching/Learning Gifted and Talented Seminar"

Dr. Eugene C. Schaffer, The University
of North Carolina at Charlotte

Three semester hours graduate coursework -
Project director, support teachers

(Additional Optional Training)

"Growth and Guidance of the Gifted Child"

Bob Eberle, Consultant and Author (Sponsored by
Project ASCENT)

Two hour session - The University of North
Carolina at Charlotte Seminar

"Beginnings: Talents and the Young Child"

Tom Rookey, Director Education Improvement Center
Central, New Jersey (Sponsored by Project ASCENT)

Two hour session - The University of North
Carolina at Charlotte Seminar

"Mainstreaming the Gifted and Talented"

Robbie Floyd and Lois Station, Project ASCENT
Support Teachers

One hour session - ACEI State Convention

"Children's Literature in the Classroom"

Margaret Claiborne, Project ASCENT Support
Teacher

Three hour session - Charlotte-Mecklenburg
In-Service

The University of North Carolina at Charlotte Training
Program

Teaching/Learning Gifted and Talented - HDL 625E
Dr. Eugene C. Schaffer, Shirley Ritchie, and
Gary Harold - Lecturers
Three hour graduate course

Objectives:

1. To explore the philosophical and historical background of efforts to identify and provide special programs for students identified as gifted and talented.
2. To critically analyze the various curriculum models.
3. To become familiar with and to critically analyze instructional strategies.
4. To examine current trends in the identification of, programming for, and instruction of gifted and talented.
5. To examine personal growth and development for potential talents.

Concepts of Diagnostic Instruction: Gifted and Talented -
HDL 626C

Dr. Eugene C. Schaffer - Instructor
Three hour graduate course

Rationale:

This course is designed as a second course in a two course sequence intended to examine in detail the areas of curriculum modeling, program development and instructional strategies as they relate to the education of youngsters identified as gifted and talented. This course focuses primarily upon current trends and practices in diagnostic/prescriptive teaching with emphasis on techniques, methods and materials effective in dealing with children identified as gifted and talented. The focus of the course is upon the sharpening of the teacher's skills in the utilization of theoretical constructs in the design and application of teaching methodologies for day to day classroom use.

Objectives:

1. To reexamine and redefine the individual student's concepts of teaching and learning, particularly as they relate to this area of exceptionality.
2. To assist teachers in the development of individual teaching styles most appropriate to maximum development of students identified as gifted and talented within the least restricted environment concept.

Methods and Activities Used in In-Service Training

lecture	small group discussion
brainstorming	boundary breakers
flow charting	building centers
group decision making	slide/tape presentations
critiquing books	movies
sharing ideas	classroom observation
child observation	values clarification
independent study	creating materials

Materials Resource Room

Materials were bought from project funds and borrowed from the Regional Center to establish resource centers for teachers in every school. The centers were located close to the support teacher's station so that she could supervise check-out of materials.

Project ASCENT
In-Service Training 1977-78
Participants Record Form

Name _____

N.C. Teacher's Certificate

Approved for _____ renewal
or certification credits
in Gifted and Talented Edu-
cation.

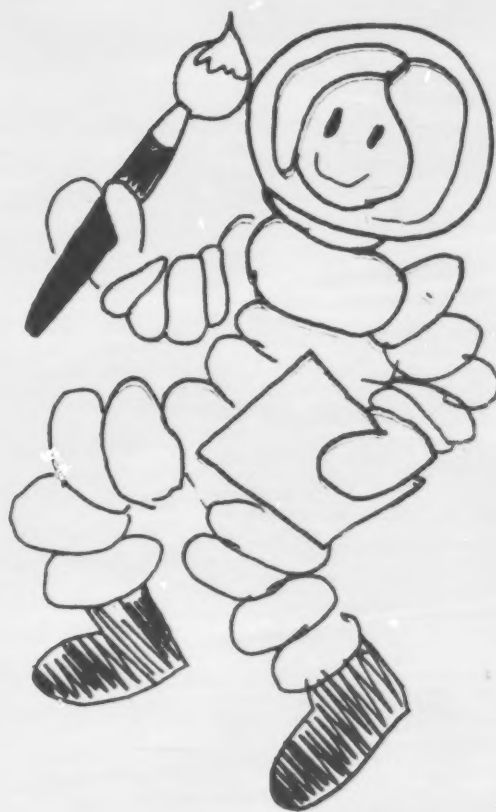
Shirley Ritchie, ASCENT
Program Director

Activity	Month	Hrs	Month	Hrs	Month	Hrs	Month	Hrs	Month	Hrs
Project ASCENT Staff Meetings and In-Ser- vice (One credit per 10 hours)										
Area In-Service (Lec- tures, Workshops, etc., in Early Childhood and/or Gifted and Talented Education) (One credit per 10 hours)										
Other										

Total Number of Hours



IN-FLIGHT ACTIVITIES



Note to teachers:

This curriculum outline is a sincere attempt to offer help with practical suggestions that worked in Project ASCENT. These learning activities were developed and offered as new experiences for the gifted and talented students in the project. It is important to note the grade level at which the activities were offered since they were accelerated.

Sincerely,

Margaret Claiborne

Margaret Claiborne, Project
ASCENT Support Teacher

Robbie Floyd

Robbie Floyd, Project
ASCENT Support Teacher

Lois Staton

Lois Staton, Project
ASCENT Support Teacher

CHAPTER IV

THE CURRICULUM

The Basic Curriculum

The exploratory process for young children is essential in providing concrete experiences which form the foundation for the development of language and mathematical concepts. The child forms abstract thought only after having concrete experiences. The Project ASCENT classrooms are developing more ways to enrich children's exploratory experiences through more and varied materials which they may handle and observe, discuss with others who question what they see and do.

The development of language is encouraged through conversation with others, writing, painting, and construction of various kinds. The children are encouraged to express themselves in as many ways as possible.

*The exploratory process originates with the child and consists of a number of components: developing the senses for perceiving the environment; sensitivity to patterns and relationships in the environment, observing, ordering, and developing strategies for answering them; and critically interpreting experiences.

Resources for the Basic Curriculum

Books

Barth, R. Open education in the American school. New York: Agathon Press, Inc., 1972.

Collier, M. J. Kid's stuff. K and Nursery, Primary. Asheville, N.C.: Tarmac.

Croft, B. J.; & Hess, R. D. An activities handbook for teachers of young children. Atlanta: Houghton Mifflin Co., 1975.

*"A Resource Paper for Curriculum Design," Division of Kindergarten-Early Childhood Education, N. C. State Department of Public Instruction.

Books (Continued)

Furth, H. G. Piaget for teachers. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970

Gambrel, L., & Wilson, R. Focusing on the strengths of children. Belmont, California: Fearon Publishers, 1973.

Hertzberg, Alvin, Stone, & Edward. Schools are for children. New York: Schoken Books.

Holt, J. How children learn. New York: Pitman Publishers Corp., 1964.

Kaplan, S. A young child experiences. Pacific Palisades, California: Goodyear Publisher Co., Inc., 1975.

Kohl, H. The open classroom. New York: The New York Review, 1969.

Nuffield. Mathematics project. New York: John Wiley and Sons.

Nyquist, E., Hawes, G. (Ed.). Open education. New York: Bantam Books, 1972.

Rogers, V. Teaching in the British Primary School. New York: MacMillan, 1970.

Raths, L. E. Teaching for thinking. Columbus, Ohio: Charles E. Merrill Publishing Co., 1967.

Schivebel, M., Ralph, J. (Eds.). Piaget in the classroom. New York: Basic Books, Inc., 1973.

Silberman, C. Crisis in the classroom. New York: Random House, 1970.

Van Allen, Roach, & Claryce. Language experience in reading. Chicago, Ill.: Encyclopedia Britannica Press.

Voight, R. C. Invitation to learning. Washington, D.C.: Acropolis Books, Ltd., 1974.

The Affective Curriculum

Teachers' replies to the question, "What do you most want the children to learn," almost invariably pertain to the affective domain: self-respect, responsibility, honesty, creativity. It is impossible to ignore basic needs of self-esteem and loving acceptance and expect a child to learn his cognitive lessons or develop his talents. We must find out how children feel about themselves and their school, what is important to them, what they are like as people and what their values are. Yet almost all accepted curriculum guides deal only in the cognitive domain.

Surely human relations skills are known and can be taught - only the willingness to do so is needed. Teachers who have not participated in learning human relations skills often fear the unknown, become unsure of themselves and project this insecurity to their students. The young child above all needs acceptance, love and security from teachers who are able to provide these things.

Project ASCENT advocates an affective curriculum at least equal to the cognitive curriculum. One-half of all teacher training sessions is devoted to personal growth and affective activities. Many teachers accept these activities well but others are resistive and uncomfortable. Some express the feeling that these activities are "a waste of time." When these teachers are encouraged to incorporate an affective curriculum into the classroom, they seldom find time, indicating they feel the activities are a waste of children's time, also. Perhaps this attitude is an indication of need for further development of teacher training which leads to self-knowledge and clarifying of values.

Resources for Affective Curriculum

Books

- Borton, T. Reach, touch and teach. New York: McGraw-Hill, 1970.
- Castillo, G. Left-handed teaching. New York: Praeger Publishers, 1974.
- Eberle, R., & Hall, R. Affective education guidebook. Buffalo, New York: D, O. K. Publishers, 1975.
- Ginott, H. Between teacher and student. New York: MacMillan Co., 1972.

Books (Continued)

- Glassar, W. The identity society. New York: Harper and Row Publishers, 1972.
- Glassar, W. Schools without failure. New York: Harper and Row Publishers, 1972.
- Gordon, T. Teacher effectiveness training. New York: Peter H. Wyden Publisher.
- Harris, T. A. I'm o.k., you're o.k. New York: Harper and Row Publishers, 1969.
- Lyon, H. C. Learning to feel, feeling to learn: Studies of the person. Columbus, Ohio: Charles E. Merrill Publishing Co., 1971.
- Miller, J. P. Humanizing the classroom. New York: Praeger Publishers, 1976.
- Raths, L. E. Values and teaching: Working with values in the classroom. Columbus, Ohio: Charles E. Merrill Publishing Co., 1966.

Articles

- Abraham, W. Counseling the gifted. Focus on Guidance. Denver, Colorado: Love Publishing Co., September 1976.
- Adams, D. Building moral dilemma activities. Learning: The Magazine for Creative Teaching, March 1977.
- Lickons, T. How to encourage moral development. Learning: The Magazine for Creative Teaching, March 1977.

Materials

- Filmstrips: Guidance Association, 757 Third Avenue, New York, New York 10017. "First Things" Series.
- Scott Education Division, Holyoke, Mass. 01040. "Our Feelings."
- DUSO KITS. American Guidance Services, Inc. Publisher's Building, Circle Pines, Minnesota 55014. "Developing Understanding of Self and Others," Level 1 and 2.

HUMAN DEVELOPMENT PROGRAM: Human Development Training Institute, Inc., 757 University Avenue, La Mesa, California 92041. "Magic Circle." A Curriculum on Conflict Management Circle Book.

The Creative Curriculum

One major goal of Project ASCENT is to promote creativity: the conception by an individual of an event or relationship which, in the experience of that individual, did not previously exist.

This means that the creation of a unique product need not be the criterion for judging a child's learning or work as creative. It means that every child recreates the world anew, and in the "anewness" lies his creative potential. We have attempted to offer situations in which the "anewness" can happen.

By expressing genuine appreciation of what a child produces as an expression of his/her ideas without imposing adult standards and interpretation, the teacher releases and guides creativity. Praise and recognition are essential as are sharing appreciation of everyday things - clouds and trees, smells and sounds that go unnoticed, textures of common objects. Sensory experiences lead to ideas and feelings which need to be shared and expressed. The child needs time to think in a relaxed atmosphere with flexible scheduling.

If we do not pounce on every product, if we allow children to proceed in their explorations without being too goal-driven at this early age, we may, in the long run, allow them to grow up engineers and salesmen and artists and politicians who can see more than one viewpoint, think of more than one rigid way to solve a problem, who are, in short, equal to dealing with our complex universe in new and creative ways.

Resources for Creative Curriculum

Books

DeBono. Lateral thinking. New York: Harper and Row Publishers, 1970.

DeMille, R. Put your mother on the ceiling. New York: Viking Press, 1973.

- Eberle, R. T. Scamper. Buffalo, New York: D. O. K. Publishers, Inc., 1970.
- Getzels, J., & Jackson, P. Explorations with gifted students. Creativity and Intelligence. New York: John Wiley and Sons, 1962.
- Getzels, J., & Jackson, P. Project implode. Igniting Creative Potential. Salt Lake City, Utah: Aaron Press, 1972.
- Lowenfeld, V., & Brittain, W. L. Creative and mental growth. New York: MacMillan Publishing Co., Inc., 1975.
- Lowenfeld, V., & Brittain, W. L. Making it strange. New York: Harper and Row, 1968.
- Meeker, M. The creative learning workbook. El Segundo, California: S.O.I. Institute.
- Parnes, S., & Harding, H. A source book for creative thinking. New York: Charles Scribner's Sons, 1962.
- Taylor, C. W. (Ed.). Climate for creativity. New York: Pergamon Press, 1972.
- Taylor, C. W. (Ed.). Teaching and learning creatively. Governor's School Teacher Training Institute. Raleigh, N.C.: Department of Public Instruction, 1976.
- Torrance, E. P. Guiding creative talent. Englewood Cliffs, N. J.: Prentice Hall, 1962.
- Torrance, E. P., & Myers, R. E. Creative learning and teaching. New York: Dodd Mead and Co., 1970.
- Williams, F. E. Encouraging creative potential. Englewood Cliffs, N. J.: Educational Technology Publications, 1972.
- Woods, M. Wonderwork. Buffalo, N. Y.: D. O. K. Publishers, Inc., 1970.

Periodicals

- Parnes, S. (Ed.). The Journal of Creative Behavior. Buffalo, New York.

The Differentiated Curriculum

In a mainstream environment, it is not possible to cleanly define or separate the differentiated curriculum from the on-going activities in the classroom. Since it is desirable to integrate all activities, gifted and talented students will expand and extend activities as fully as possible in line with their abilities and interests.

For the gifted, creative and motivated student who can handle free-time responsibility and independent study, lack of opportunity to do so because of school restrictions is stifling and can result in boredom, resentment and sometimes rebellion. There must be a way of freeing up these pupils to operate on their maturity level.

Methods advocated include such things as independent contracts, establishment of interest centers to be shared with other students, free time to explore and create among a variety of materials, experiences outside the classroom and chances to meet and share interests with adults outside the school setting.

Resources for Differentiated Curriculum

Books

- Broome, E. (Ed.). Educating for the future. 21st Century Teaching. Governor's School Teacher Training Institute, 1973.
- Eberle, R. T. Classroom cue cards. Buffalo, New York: D. O. K. Publishers, Inc., 1974.
- Forte, I., & MacKenzie, J. Creative science experiences for the young child. Nashville, Tennessee: Incentive Publishing Co., Inc., 1973.
- Gallagher, J. J. Teaching the gifted child (2nd ed.). Rockleigh, N.J.: Allyn and Bacon, 1975.
- Gowan, J. G., & Torrance, E. P. Educating the ablest. Itasca, Illinois: F. E. Peacock Publishers, Inc., 1971.
- Guilford, J. P. The nature of human intelligence. New York: McGraw Hill, 1967.

Books (Continued)

- Henson, F. O. Mainstreaming the gifted. Austin, Texas: Learning Concepts, 1976.
- Henson, F. O. Learning through collaboration. Governor's School Teacher Training Institute. Raleigh, N.C.: N.C. Department of Public Instruction, 1975.
- Tongue, C. (Ed.). New dimensions: Gifted/talented. Raleigh, N.C.: Department of Public Instruction, 1975.
- Torrance, P. Gifted children in the classroom. Riverside, N.J.: MacMillan and Co., 1969.
- Williams, F. E. Classroom ideas for encouraging thinking and feeling. Buffalo, N. Y.: D. O. K. Publishers, 1970.
- Wurman, R. S. Yellow pages of learning resources. Mobile, Alabama: Department of Special Education, College of Education, University of South Alabama.

Periodicals

- Good Apple. Carthage, Illinois: Good Apple, Inc.
- Gowan, J. (Ed.). The Gifted Child Quarterly. Northridge, California.
- Learning: The Magazine for Creative Teaching. Boulder, Colorado.

Family Grouping

One method of grouping which is successful in a mainstreaming approach to providing special services to gifted and talented students is the family grouping. This grouping is a small heterogeneous mix of students from six to eight in number. Each family group is balanced as fully as possible by sex, race, age, ability, and exceptionality. Family groups are structured by the teacher. Heterogeneity is purposely chosen so that differences among children will be established in as broad a range as possible.

These family groupings may make up the central organizational unit of the classroom. Within the family is located a dependable set of resources for each student which allows for continuing development. There should be one gifted and talented pupil in a family.

Family grouping is an orderly way for beginning the day, for introducing new materials, exploring a new learning center, going on field trips, developing leadership skills and understanding and accepting differences. With the necessity for cooperation in the group, such qualities as patience, self-control, self-acceptance, tolerance, forgiveness and compassion can be taught to the members.

Families also offer the best chance for a student to practice leadership. The leader of the group can help other students find needed resource. Of course, when no one in the family can help, a student in another family or the teacher provides leadership. Although the teacher is the real head of each family, he or she cannot always be physically present and the student may draw on other resources in the classroom.

Since family grouping represents a major shift in emphasis in the student and teacher roles over previous forms of grouping, it requires re-training of the teacher's skills and attitudes. Within this system, the teacher must recognize the potential of all students to contribute to the group and work to maximize each individual student's contribution. If this is accomplished, the student has a greater chance to be accepted and learn according to his or her own unique abilities.

Communities in Nature, Part I: How to Start a Terrarium When the Weather Outside Is Frightful

Most third graders study communities in nature as a part of the science curriculum at some point during the year. At Beverly Woods, the point came in January.

One of the obvious ways to enrich such a curriculum is to have your bright and eager young scientists plan, plant and populate a terrarium, then care for it the rest of the year.

This is easiest to do in the spring, but if you have to do it in January--here's how.

The Project support teacher sent plans for a very large terrarium to a local junior high school woodworking shop.

Finished, the terrarium was 43 inches wide, 24 inches high and 19 inches deep. It was built of wood with a plate glass front and had a ventilated wooden lid with a fluorescent light in the top to heat the inside during cold weather.

The box was placed on a very sturdy table in the classroom. While two third grade classes watched, the support teacher and several students layered the box with 10 pounds of pea gravel, 3 pounds of charcoal (aquarium charcoal is best because it is free of chemicals), and 3 pounds of sand. The teacher explained to the class that these layers were to insure good drainage of moisture in the box, that the charcoal would purify the water which would constantly be going through a cycle, collecting as water, rising through the air as fine mist, then dripping back down the sides of the box into the soil again. The layers were made into hills and valleys to duplicate a natural environment as much as possible. A small dish was sunk into a valley and filled with water.

The next day, the children who had indicated an interest in natural science went on a field trip in woods next to the school. The temperature was 13 degrees, but the children were active and happy. They discovered that any number of green plants flourish in the North Carolina woods in mid-winter: winter green, which has little white blossoms, wild strawberry, little pine and cedar trees and mosses and sticks. Mosses and plants were put into medium sized plastic bags with twist tops which kept them moist. Using a mattock, the teachers broke up the frozen earth, and we collected about 20 pounds of woods dirt.

The next day two children helped the support teacher layer her office with newspaper. The woods dirt was emptied onto the paper, then sifted through coarse screen to get out leaves, sticks and varments (carefully put into plastic bags to reinstate in the terrarium later). The dirt was baked in the cafeteria oven at 350 degrees for 45 minutes to sterilize it. Then it was layered into the terrarium and some potting soil was put on top.

Children first planted the plants, positioned a moss covered stick as a climbing post for lizards, then put in the mosses.

A thermometer was taped to the inside of the box and the fluorescent light was turned on. Class members who kept track of the temperature for several days discovered the light had to be kept on all the time to keep the temperature up to 70 degrees.

The class ordered snails, three newts, two Carolina anoles, some ferns, liverwort for the "pond" and a fruit fly culture and a meal worm culture to feed the terrarium animals. These came from Carolina Biological Supply in Burlington, North Carolina. A "mister" provided water for plants and lizards. We misted the terrarium daily.

When April and warm weather came to North Carolina, the temperature in the terrarium zoomed to 80 degrees--too hot for lizards. The light in the terrarium was turned off--but with a wooden lid--only a little light came in through the air holes. Mold began to form on the plants. Ultimately, the wooden top was replaced with a sturdy, fairly fine screen. Lizard's food was dropped through the holes in the screen. We got a new fruit fly culture--the wingless variety this time.

Next winter, the wooden top with light can go on again, easily. It is simply a case of screwing in the hinges at the back.

Additional Enrichment

"Communities in Nature," an ecology learning module, Society for Visual Education, Inc., 1345 Diversey Parkway, Chicago, Illinois 60614. This is an early childhood science kit that includes eight color filmstrips, four murals of communities in nature--the ocean, the desert, the forest and the pond, four sets of community members with two cassettes explaining the murals, two board games and a cassette explaining the games, a food chain chart, a food web chart, twenty-four community members and two teacher manuals. The filmstrips are: "Living Things Adapt to Their Environment," "Living Things Adapt to Each Other," "Living Things Form Communities," "Green Plants in a Community," "Animals in a Community," "Energy Flow in a Community," and "Scavengers and Decomposers in a Community."

Communities in Nature, Part II: The Fish Community

One of the project children was especially interested in Siamese Fighting Fish. So when the time to study "Communities in Nature" came--we decided we needed an aquarium to study--and that we would populate it with Siamese Fighting Fish--two--males--and observe their reactions to one another. We bought a 20 gallon aquarium, had a hardware store outfit it with a glass divider down the center and a plastic opaque piece that could be moved up and down like a shade. We wanted the fish to be able to see each other and react--from time to time--but not all

the time. We were told fighting males change color when they see each other--try to attack. We also were told that they would respond with anger to some geometric shapes held to the side of the aquarium.

We outfitted our aquarium with gravel, plants, a charcoal filter, air pump, thermometers on each side, and some chemicals to dechlorinate the water. One student wrote a report on how the water filters work, another on what the red "stuff" in the thermometers was, another on how you get chlorine out of the water and why you need to do that. One boy wrote a report on "bettas"--another name for Siamese Fighting Fish.

We placed an observation journal next to the aquarium and one student designed geometric shapes to show the fish. Students were able to observe the fishes' reactions to the shapes when they held them up to each other and when they raised the opaque "shade."

Communities in Nature, Part III: The Pass System

Other children wanted to see the terrarium and aquarium set up in two project classrooms. So those teachers taped "pockets" with three passes each on the doors of their rooms. Children from other classes could come in whenever they wished to view the centers, read books the teachers had collected on plants, animals and fish, and see other students' reports. But it was made plain to the students that they could come in only if there was a pass in the pocket on the door.

Making Math Real

Educators say that in early childhood, students learn best by exploring and doing. They need many concrete, manipulative materials, many hands-on experiences before they can begin to grasp abstract ideas.

Here are some math activities that were introduced into first and second grade classrooms at Beverly Woods to help children experience firsthand some concepts they were being taught mostly through board work and paper work before.

1. The Sand Table. A sand table was placed in the hallway and outfitted with a number of containers--nesting bowls, a variety of plastic bottles, mugs and so on, all unbreakable. Children were allowed to play freely there for several weeks. The

teacher kept an eye on them to see what they were learning, and to interject questions: "Which containers hold the most sand? Who would have thought those two very different shaped bottles would hold the same amount! How many cups of sand will fill that bowl, do you think?"

At one point, a pair of scales was introduced so that children could compare the weights and guess in advance which container of sand would be heaviest. Also, wet and dry sand were compared.

In all the sand play, children were experiencing filling three-dimensional space, all leading eventually to the concept of volume. Even though some would not fully understand the concept until they are eleven or twelve, they need the practical experience throughout their young lives if they are really to learn what volume is.

Rightly used by the teacher, the sand table will enrich children's vocabulary. For example, children can be encouraged to describe containers in a variety of ways--not just big, bigger, biggest, small, smaller, smallest--but wide, narrow, thin, thick, tall, short, deep, shallow. (Sand ideas from Mathematics: The First Three Years," a Nuffield handbook, organizer for teachers, by Geoffrey Matthews; publisher: John Murray, London.)

2. Number Blocks. A commercially produced math activity to teach addition, subtraction and multiplication in such a way that children can observe, physically, what happens when, for example, you multiply 10 times 10. Blocks are cut into single units one centimeter square, rods 10 centimeters square. The blocks come with duplicating masters for many activities.

For several weeks after they were put in the room, the blocks were used by the children simply for play. Students were allowed to discover the relationships for themselves--that 10 units are the same length as one rod, the 10 flats stacked up equal one cube. Later, activity sheets of things to build with the blocks were added. Finally, "The Banker's Game" was introduced.

Banker's Game

			
Cube	Flat	Long	Unit
thousands	hundreds	tens	ones

Adding

You need two die. Roll them. Add what appears on the dice. Each dot will give the player a unit block. He places these on the playing board under "ones." When the player gets 10 units, he can trade them in for 1 "long." He places the long in the "tens" section of the playing board. When the player has rolled the dice enough to get 10 longs, he can trade them for a flat. Ten flats can be traded for a cube. Whichever player gets all his units traded up to the cube section first, wins. When the game is first introduced to young children (first graders) it is best to play a simpler game, using only the tens and ones sections of the playing board. Play only to a predetermined amount, like five longs. Up to four children can play one board comfortably. Make it a big board.

Subtraction

With young children, start with a low predetermined amount: place three longs in the long column for each child. Roll dice, subtract what is rolled.

--After the children have mastered both games, get them to record each time what they have rolled.

The trading game involves regrouping and renaming. The subtraction part of the game will help children with equations like this one: $5 + \square = 7$. Many bright children have trouble with any problem that has the blank in the middle, simply because their minds have not developed the mental construct for reversibility of thinking. The subtraction part of the banker's game will show this up. As children begin developing the ability to reverse, they will become better at subtraction. The game will help them. Most K-3 children will learn the mechanics of problems that use the symbols $<>$, $+$, $-$, $\times$ and $=$ but to understand their meanings, they must work with concrete materials like scales and blocks to know what "less than," "greater than," and "equal" mean.

3. Games with Dice: Activities were worked out by Tom Clark, a member of the faculty of the College of Human Development and Learning, The University of North Carolina at Charlotte.

Throw two dice. Add or subtract the numbers you get, but only say aloud the outcome. Let the child tell you what you have done. This calls his attention to the process you have gone through.

Take three dice. Roll two of them. Add only the two smaller numbers: for example, a two and a three. Do not tell the child the outcome. Say: "Show on the third die what I would need to make all three of these dice add up to eight." Any variation of this will be fine.

Put dice down on a piece of paper in an equation. Get the child to write the correct numbers underneath. Then give the child one of the die. Use the other two in an equation with a blank.

$$\begin{array}{ccccc} \boxed{\dots} & + & \boxed{\dots} & = & \boxed{\dots} \\ 3 & + & 2 & = & 5 \end{array}$$

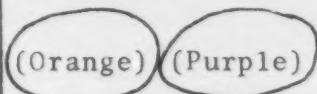
$$\boxed{\dots} + \quad = \boxed{\dots}$$

Ask him to turn his die and put it in the blank spot in the equation so that it makes sense to him. This makes him think through the procedure. In talking to the child, instead of saying, "Three plus two equals five," try: "Five is another name for three plus two." You are re-naming.

4. Sets and Sub-Sets

This game was designed by Harvey Sadoff, a member of the faculty of the College of Human Development and Learning at The University of North Carolina at Charlotte. It helps young children understand sets, sub-sets, naming and renaming. Children who are talented in math work at endless combinations of numbers. The games were drawn on regular manilla folders. Small colored blocks, such as are used in kindergarten rooms, were given the children to work with. You might want to start with five blocks. Ten blocks are the best to work with. They give children a good understanding of base 10.

Take an even number of blocks. Put some in one circle. Put the rest in the other. How many in each?



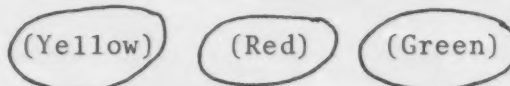
Write the number of blocks in each on your work sheet.

How many ways can you do it?

Write the ways you do it on your work sheet.

(2)

Take an even number of blocks. Put some in one circle. Put the rest in the other two circles.



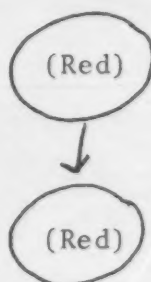
Write the number of blocks in each circle on your answer sheet.

How many other ways can you do it?

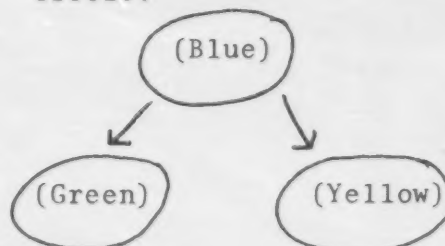
Fill in as many ways as you can on your worksheet.

(3)

Move all the blocks from one red circle to the other.



Put some blocks from the blue circle down in the green circle. Put the rest in the yellow circle.



Write the number of blocks in each bottom circle on your worksheet. Try lots of ways.

Here are some books that will help you to develop an excellent concrete math program:

Baratta-Lorton, M. Mathematics their way. Atlanta, Georgia: Addison-Wesley Publishing Co.

Beginnings. Nuffield Foundations. London: John Murray Publishers.

Copeland, R. W. Diagnostic and learning activities in mathematics for children. New York: MacMillan Co.

Copeland, R. W. How children learn mathematics, teaching implications of Piaget's research. New York: MacMillan Co.

I do and I understand. Nuffield Foundations. London: John Murray Publishers.

Mathematics: The first 3 years. Nuffield Foundations. London: John Murray Publishers.

The Bookmaking Center

All children enjoy making pretty little books. But how worthwhile the activity is depends entirely on the teacher working with the children. Will she see the measuring, estimating and decision-making involved as valuable math activities? Will she work with the children on poetry and the business of expressing themselves in many different ways?

At Beverly Woods, a second grade teacher set up the bookmaking center (directions on the following pages), then got the Media Specialist to do a special unit for them on the history of books and bookmaking. Afterwards, the Media Specialist worked with interested children in writing biographies, poems, histories and fantasies. One student even designed her own math book!

The second grade teacher asked parents to come to school at certain times to work with the children on the mechanics of bookmaking. Now that Project ASCENT has opened an Art Resource Center, children are being encouraged to go there to illustrate their stories.

One thing that made this particular bookmaking center popular with the children was an outdated wallpaper sample book--full of shiny foil paper that they used to cover their books. One little girl, having covered her book in a particularly fancy gold and white-flocked paper, exclaimed, "I just have to write something beautiful inside this!"

All About Me

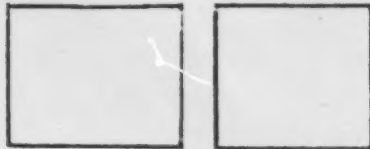
My name is
Patricia and I have
this moment to tell
you about myself.
When I grow up I
want to be a teacher
and a singer, too.

My favorite time to
stay outside is night.
And I'm very
thankful for what
I had to say to
you all. Well, I
got to say goodby.
Patricia

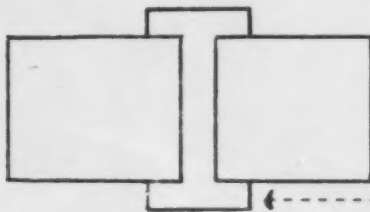
Practical Bookbinding

Materials:	Cardboard	scissors
	10-15 sheets of paper	glue (rubber cement)
	needle	ruler
	thread	wide heavy tape
	gift wrapping paper	paper cutter
	or fabric	pencil
	pointed instrument	
	(compass, nail)	

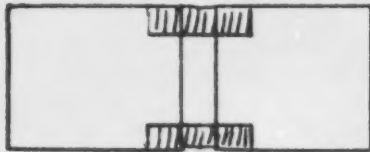
Decide on the size you want your book to be and what type of paper or fabric you will use to cover your book.



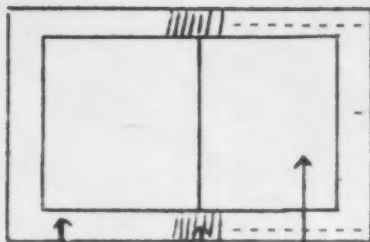
- (1) Cut 2 pieces of cardboard the same size.



- (2) Cut a piece of wide tape 2" longer than the length of your cardboard.



- (3) Place cardboard pieces on tape - leaving 1/2" between the two pieces and fold tape over.

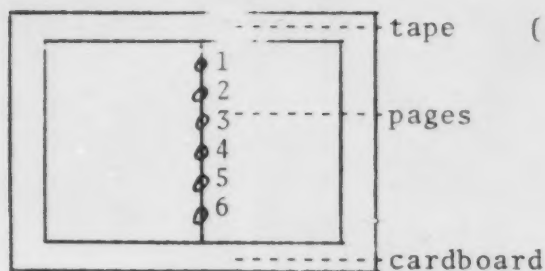


- (4) Fold stack of papers in half. Center pages on the cover making sure the crease rests on the tape. Trim pages to be 1/2" smaller on the top, bottom, and sides of cardboard cover (use paper cutter, if available).

cardboard

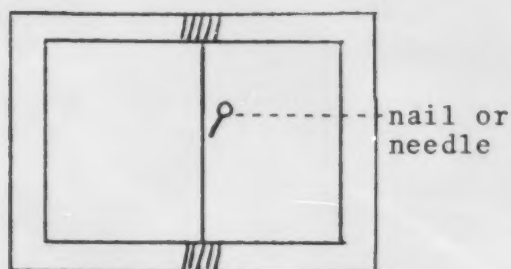
crease

pages



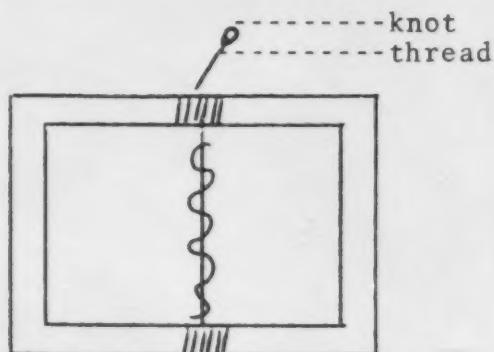
- (5) Keeping pages on the cardboard, mark (with pencil) 6 dots on the centerfold - evenly spaced.

(Dots 1 and 6 should be approximately 1/2" - 1" from the top and bottom of the page.)



- (6) Using a nail or sharp needle, hammer* or poke holes all the way through the stack of papers and cover at each of the 6 markings.

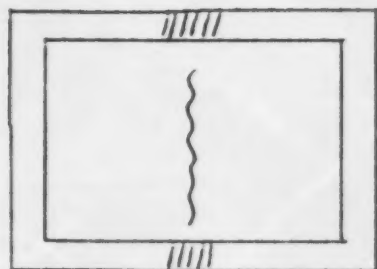
*If you use a hammer and nail, rest your book on a piece of wood when hammering!



- (7) Thread needle - double thread - and knot.

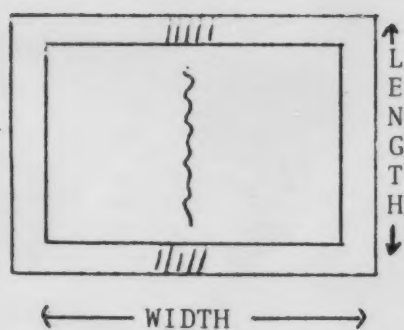
- (8) Sew through holes in cover and pages starting from the outside of cover at hole 1, down through 2, and so on.

- (9) When you come to hole 6 go back again and finish off your sewing on the cover side.



- (10) When you finish sewing in and out of all the holes, your pages will look like this.

- (11) Measure your cardboard cover when open.



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- (12) Take the fabric or paper you chose to cover your book and cut it so that it is 3" wider and 2" longer than the cover.

(E.g., if my bookcover is 10" wide and 7" long - then my fabric/paper will be 13" wide and 9" long.)

The Study of Micro Organisms

Objectives:

1. To learn about micro organisms that live in fresh water and compare these one-celled animals with human cells.
2. To help children learn how to collect specimens for a science center.
3. To learn use of the microscope.
4. To learn how to make scientific observations.
5. To learn how to do research.
6. To learn how to present learned material.
7. To learn how to work video tape equipment.
8. To create a child-produced learning tool that other children can learn from.
9. To create a child-produced learning tool that other teachers may use as a model.

Grade Level: Third grade.

Materials: It is necessary to have access to a TV camera trained on a powerful microscope such as those found in dental training schools, some dentists' offices or museums. Clean jars with lids to collect pond water, plastic slides and slip covers for each child, eye droppers for each child, one half-hour video tape plus video tape recorder and monitor and necessary cords to plug equipment into wall outlets and into the microscope camera.

Time Required: Field trip and video recording of slides - one and one-half hours. Research -- according to interest of children -- about two hours. Editing tape to one minute per slide (professional help needed) - two days. Dubbing in sound on slides -- forty-five minutes. Recording introduction, additional report on bacteria - three forty-five minute periods in Media Center.

Procedure:

1. Arrange to accompany students on a field trip to gather algae and water from a lake or creek.
2. Arrange to take the children to an available site for using a microscope/camera unit.
3. Select a group of six to eight students whose particularly area of interest or talent is science.

Activities:

1. Discuss with children the use of the microscope, help them to prepare slides from pond specimens they have gathered, place slides under microscope, turn on camera and monitor so that children may observe each slide as a group. Make video tape recording on each slide to take back to school. Human cheek cells, taken from a child's mouth, can be compared to one-celled organisms.

Have each child write down information of what micro-organisms are observed on each slide.

2. Back at school, have children do further research of micro-organisms. Some may look up the paramecium, some diatoms, some algae, some cells. Some may do a report on what a cell is, how human cells compare with one-celled animals.
3. Have children tape an introduction to the video tape presentation of slides -- dub in sound, explaining each slide.

This is a good activity for a group of children with very different levels of ability. All students will learn from the field trip and teacher's oral presentation, and will be able to explain what they have learned via video tape recording. Because the lesson is open-ended, advanced students can take the study of micro-organisms as far as they are able. One third grader's report on bacteria was at least at the high school level. So was his understanding -- if not his pronunciation!

Every classroom teacher should learn the simple procedure of working video tape equipment, if it is available in the school and teach as many students as possible how to

operate it. Operating sophisticated equipment can increase children's self-esteem and enthusiasm for learning.

Machines and Tools

Objectives:

1. To introduce concepts of wheels, axles, levers, gears, inclined planes, and pulleys.
2. To acquaint students with simple construction tools.

Grade Level: First grade. (Small group of five to eight.)

Materials: Small cars, gears (such as on egg beater), pulleys, rope, narrow boards, hammers, saws, nails, wheels of all sizes, small pieces of wood, and glue.

Time Required: Bi-weekly thirty minute sessions for five weeks.

Activities:

1. Constructing small cars.
2. Racing cars on inclined planes.
3. Viewing and discussing operation of gears.
4. Viewing filmstrips: "Wheels," "Axles," "Levers," "Pulleys," "Inclined Planes." (John Handy Corp.)
5. Visiting auto mechanic shop.
6. Visiting small manufacturing plant.

Literature

Objectives:

1. To comprehend and remember events in lengthy story.
2. To increase vocabulary.
3. To analyze events.

4. To relate events of story to actual experiences.
5. To evaluate meanings.
6. To develop writing skills.

Grade Level: First grade. (Small group of five to eight.)

Materials: Charlotte's Web (or other lengthy higher than grade level story with fantasy and moral implications), materials for constructing writing books, construction paper, chalk, cotton balls, pipe cleaners, string, cardboard, and paint.

Time Required: Bi-weekly thirty minute sessions for five weeks.

Activities:

1. Teacher reads story to students for approximately ten minutes stopping each time at an exciting point.
2. Review new words by having each student remember and define a word he/she learned previously.
3. Students recall events of story.
4. Students hypothesize upcoming events and discuss moral implications and fantasy.
5. Students construct a web of string and make spiders from pipe cleaners and cotton (may paint cotton).
6. Students write a few original sentences each session in books.
7. Students construct and paint a barn from cardboard and make characters from story to put in it.
8. Students pretend to be a spider spinning a web and make necessary body movements.

Dramatics

Objectives:

1. To allow for self-expression.
2. To develop writing skills.
3. To develop leadership skills.

Grade Level: Second grade.

Materials: Tagboard, crayons, scraps of cloth, rulers, plywood, paint and hinges.

Activities:

1. Select two students with writing and leadership skills and allow them to direct activities as much as possible.
2. Select actors.
3. Construct puppets from tagboard, dress them with fabric and mount them on rulers.
4. Construct theater from plywood or cardboard for puppets.
5. Rehearse parts.
6. Present play to classmates.

Note: This activity was varied by constructing a large papier mache animal (dinosaur) and having the group write a play around this character.

"A Dinosaur Named Rex" - (next page)

"A Dinosaur Named Rex"

Narrator: Once there was a dinosaur named Rex. And he said.

Dinosaur: Boo hoo hoo every body is afraid of me and no one likes me.

Narrator: But ten kids were near by and they heard what the dinosaur said.

Ten Kids: Poor dinosaur. We must try and help him.

Narrator: So they walked over to the dinosaur and said to him.

Ten Kids: Hello! Mr. Dinosaur we have come to be your friend because we heard what you said.

Dinosaur: Oh thank you very much! And I shall help you in anyway I can. And I will build you a house.

Narrator: And so he did. One morning the dinosaur said . . .

Dinosaur: Good morning kids. I have something new for you since you've been my friend.

Ten Kids: Oh! What do you have for us?

Dinosaur: I can not tell you! You will see what it is this afternoon.

Ten Kids: O.K. We will see what it is this afternoon.

Narrator: So that afternoon they found out what the surprise was.

Ten Kids: Oh Boy! It's time to go see what the suprise is. I can hardly wait.

Narrator: So they all walked over to the dinosaur and said . . .

Ten Kids: We have come to see what the surprise is Rex.

Dinosaur: Well the surprise is a school. I built one myself.

(Children examine school building with school over the door - spelled Skoul.)

Ten Kids: Who will teach us?

Dinosaur: I will.

Ten Kids: O.K. But what do you know about school?

Dinosaur: That is easy. I will teach you how to play.

Ten Kids: But that's easy! We're doing that right now.

Dinosaur: Boo hoo! I only wanted to help.

Ten Kids: Oh! We're sorry. I know, let us teach you first! Then you can teach others.

Dinosaur: Oh thank you!

Ten Kids: First we will teach you to spell school!

Written, produced and directed
by Jane Rudisell, Monique Niederer,
Holly Hobson and Heather Uttle.
Mrs. Freeman's Third Grade.

Creative String Play -- Make a Shape

Objective:

To promote flexible, original, fluent thinking.

Materials: Construction paper of a contrasting color to string, 15" piece of string.

Activities:

1. Students to make as many shapes as possible from their string.
2. Students make a line with all the string on the paper. Suggested items to make:

Geometric shapes, numerals, objects such as butterflies, ballons, flag.

3. Introduce new shapes, and concepts such as oval - have students describe it.
4. Brainstorm all possible shapes.
5. Categorize shapes.

Guess a Shape

Objective:

Develop leadership and group cooperation and stimulate creative thinking.

Materials: 12" length of yarn tied in a circle.

Activities:

1. Six to eight students stand in a circle holding yarn with both hands.
2. Non-verbally students make various shapes.
3. Students take turns trying to guess shapes.

Halloween Carnival

Objectives:

1. To allow for student's self-expression.
2. To create joy in the school community.
3. To involve the community in school activities.

Grade Level: All grades.

Activities:

1. Students and teachers wore costumes (90 percent of school participated).
2. Partners took turns painting each other's faces with tempera paint.
3. Mural painted on brown paper covering outside wall.
4. Each child dipped his/her own apples in candy made by the children.
5. Free play.
6. Inter-class visits to show masks made at school.
7. Songs and dances (principal danced with teachers).
8. General assembly to give "Best Teacher Costume" award.

The outgrowth of this project was a closeness which developed between teachers and children when they wholeheartedly participated in the same activities. Joy, laughter and freedom of expression reigned. One teacher commented, "This is the most fun we've had in twenty years."

Art Appreciation

Objectives:

1. Expose students to a variety of art experiences and known works.
2. Develop a more open, positive and sensitive attitude toward art.
3. Develop awareness of art in the physical environment.
4. Stimulate interest in further study in art.

Grade Level: Third grade.

Time Required: Bi-weekly thirty minute sessions for six weeks.

Activities:

1. Development of line element of art. Outline physical objects in environment. Discuss types of lines - varying qualities. Draw lines with charcoal.
2. Development of concept of contour - awareness of defined shape. Discuss types of media. Display pictures depicting different media. Draw contour of people and objects.
3. Development of concept of shape. Discuss elements of line and shape needed to create abstract composition. Look for shapes defined by line in physical environment. Compose abstract drawing.
4. Development of planear color. Discuss objective and non-objective, abstract, free form shape compositions. Experiment with light and primary colors. Make color, shape non-objective painting.
5. Development of compositions with color. Discuss geometric shapes. Discuss organization of color. Compose abstract drawing of line, shape, color.
6. Development of concepts of texture. Experience the feeling of different textures. Explore various textures in the environment. Make rubbings of textures such as walls, floors, tombstones. Make prints - noticing reversals of forms recorded.

7. Introduction of primitive art. Discuss needs of artist. Locate areas of art objects on map. Make masks.
8. Introduction of mosaics. Discuss purpose, color, texture and location of mosaics. Experiment with combination of elements. Construct collages.

This project was done with the assistance of the art department of Pfeiffer College. At each lesson, slides were borrowed from the College and presented to illustrate the concept. The children explored the school ground and visited a nearby cemetery to make rubbings and gain ideas for other compositions.

Beautify a School

At the beginning of the school year there was a desire of many teachers to beautify their building and display the children's work. The building was old with uniform, bare green walls and wooden floors. Because of rules which did not allow masking tape or nails on walls or doorways, no one had attempted to hang anything except a few commercial paintings in the halls.

The support teacher was permitted to hang string "clothesline" in the halls to display children's art. The enthusiasm over these displays led to an explosion of beautification projects. Cabinets in main halls became display cases for students' projects, windows were adorned with hanging baskets and stairwells became spring gardens with three dimensional murals covering peeling paint. Landing wall projections were galleries for weavings, mobiles and mandalas. Portable display boards allowed for any child to become a part of the project.

The school became "art minded" and appreciation was expressed with comments of, "another bare space conquered," "this place doesn't look the same, it's neat," and "it's becoming so attractive." Everyone benefited. The morale of the school population was boosted and children's self-esteem was enhanced by allowing them to display their works of art.

The Creation of the Art Resource Center. Written by Margaret Claiborne, Project ASCENT Support Teacher, Beverly Woods School.

Project ASCENT - Year One

I. The History

We were working on science, not art, when the idea for the resource center was born. Seven project children intensely interested in science met in my office one day and brainstormed the word, "science," for about five minutes. They came up with everything from "foreign lands" to "World War II" to the study of the German language. Finally, they voted to study live animals.

Having settled on a study area, they moved on, without any prompting, to consider how they would report their learning. The school's public address system was favored. So was sign language.

I talked with the media specialist. We thought a production center for all children, not just our "scientists," would be a good idea. We decided the work room area at the back of the Media Center would be a good place. In the beginning, we envisioned this as a place where children could come to make tape recordings, video tapes, filmstrips, little books, write plays and do art work.

But all of these things will not fit into one small area.

Tape recording, video taping, a place to make a little "play television" out of a cardboard box, and filmstrip making were all we could fit into the Media Center.

The bookmaking center was made part of the second grade cluster because those teachers were especially receptive to the idea. Children from other rooms can go there to use it, three at a time.

We enlarged our vision of art. I called together those project children who had expressed an interest in painting and puppet making and pottery to work with Irene Jahns, a former art teacher and parent at Beverly Woods. This was in the Media Center work room. She gave them many art activities to choose from and watched them try what they liked best. This workshop interfered with normal Media Center activities. When children are allowed to

enjoy art, they are noisy, sloppy and they require space and time.

Irene and I decided we needed an Art Resource Center somewhere besides the Media Center.

Two years ago, Irene worked in a special high school in New Jersey in which all rooms were resource centers for children. Since her experience with young children has been limited, we called on a helping teacher, Olive Kile, who is a specialist in the early childhood area in the Charlotte-Mecklenburg School System. Olive, Irene, Lois Staton, another ASCENT support teacher, and I designed the Art Resource Center. We decided the middle hall of the second floor of the school, with easy access to sinks in the first and second grade clusters, would be an ideal location for the resource center. The teachers involved agreed.

We all thought it would be good to ask parent volunteers to man the center. They would not only be helping children, they would be learning what the center is all about.

We held two workshops for parents, one on the concept of the center, the other on use of materials. The entire Beverly Woods faculty also participated in workshops led by Irene Jahns.

Two days after the Art Resource Center opened, the fire inspector came to Beverly Woods and said that it must be removed from the hallway. It is now on the stage in the multi-purpose room.

Nine mothers work as volunteers there, one in the morning, one in the afternoon, from 10:00 a.m. until 2:00 p.m., Monday through Friday. Five children at a time may use the center. There are clothespins on the stage door that they clip on their clothes when they come in. If there are no clothespins on the door, they know the center is full. A calendar on the door affords teachers the opportunity to sign up for projects that will take several days, special materials.

Booklets about the center and its materials have been given to all volunteers and teachers.

Since the center opened, it has been in continual use. More children come than can be accommodated. A teacher whose class has been studying animals, sends some

of her children to the center on a regular basis. They are making a papier mache dinosaur that is four feet tall. There is some doubt whether they will paint him grey (they are sure dinosaurs used to be that color) or pink (you cannot really be sure what color they were).

He is a Tryanosaurus Rex. They made him sitting down because they had never seen one made that way.

II. The Concept

What we are trying to do is provide an environment in which creativity can flourish.

At one of our workshops on the use of the Art Resource Center, a parent commented, "I really like this center. Art is the one thing children can participate in where there are not any definite answers. In math, two and two are always four."

"Oh no," answered Irene Jahns, the workshop leader. "In base three, two and two are definitely NOT four."

The same thing holds true in most of life. The answers are relative. So, to educate children in the truest sense, means to teach them how to solve problems, not what the "right" answers are.

Teaching children how to solve problems creatively means giving them the opportunity to make many choices, find many ways to do a thing.

In the art center, children may choose from collage, crayons, brush painting, finger painting, clay, plaster of paris, sand molding, plaster-infused tape (the kind used to make arm and leg casts) to make hand, foot and face molds, papier mache, silk screening and print making.

We are asking parent volunteers not to criticize or try to influence a child's choices. Let him/her discover for himself/herself. Next year, we will probably have workshops for parents and teachers on child development and art.

In their book on children's art, Creative and Mental Growth, Viktor Lowenfeld and W. Lambert Brittain suggest that children may benefit from indepth art experiences in one medium. Project ASCENT may experiment with that next

year. How many ways can kindergarten through third grade children express themselves in clay with the guidance of a good art teacher? We would invite a potter, perhaps, to work with the children.

Practical problem solving is one of the things the Art Resource Center emphasizes. We ask the child how much shelf paper he/she thinks he/she will need to make a finger painting. We ask him/her to cut it off the roll. How much paint will he/she need to cover the sheet? Does he/she want to cover the sheet? What color will he/she use? How long will it take to do the project?

In the beginning, we are teaching parents how to mix the plaster of paris and the paints (always thicker than they expect) so that children can experience success in the media. Later, we will let children do the mixing: "How much water should you put in that powder to make a good thick paint that will not run?" Or, "You want purple? What do you mix together to get purple?"

Measuring, covering, conceptualizing space, understanding color . . . are all part of art. They are also math and science. Children may not verbalize or understand these principles in a sophisticated way, but the experiences are an invaluable practical foundation for later applications.

In essence, what the Art Resource Center is offering is variety and practical experience. Is that an environment that promotes creativity? I think so. Traditional definitions of how gifted and talented minds work describe the thinking process in such words as "flexible, fluent, original, elaborative." Surely the resource center provides for all these operations to take place.

III. The Nitty-Gritty

Supplies for the Art Resource Center include:

Tissue paper: red, blue, yellow, green, orange, violet, brown, black, white -- one package each.

Construction paper: yellow, orange, red, blue, green -- two packages of everything except yellow and red, the most popular colors with our children. Six packages of those colors.

Newsprint: 18x24. One ream.

Manilla paper: 9x12 and 12x18. One ream each.

Prang powder paint: yellow, blue, green, orange,
violet, black, white -- two boxes each.

Crayons: large, non-roll. Six boxes.

Brushes: #9, #5, and #2. Six each.

Scissors: Six pair of children's.

Clay: 50 pounds.

Finger paints: yellow, orange, green, blue, white,
red. Two jars each.

Shelf paper for finger paints: Four rolls of white.

Silk screen.

Squeegee to use on silk screen (window washer type
is fine).

Styrofoam meat trays to draw prints on.

Ballpoint pen to make designs on meat trays.

Brayer to roll across paper when making prints.

Plaster of paris -- Eight boxes.

Shallow box or pan, about 12x18, to make sand castings
in.

Sand for box.

Plaster-infused gauze (the type used to make arm and
leg casts from medical supply house) -
two large boxes.

Wallpaper wheat paste -- four boxes.

Chicken wire -- 12 inches wide, 50 foot roll, two
rolls.

Wire cutters

Plastic bucket

Dust pan

Broom

Sponges

Pencils

Baby food jars for paint

Plastic spoons to mix paint

Potato masher to mix wallpaper paste for papier mache.

Rubber cement -- four bottles (small).

Elmer's glue -- two bottles (small).

Several rolls of paper towels.

Detergent -- to mix with paints so they won't stain
clothes as much

Vaseline -- to put on hands or feet before doing
plaster-gauze mold.

Oil cloth -- 6 yards for floor.

Large roll of paper to put on wall for graffitti.
painting to music.

Large yarn -- for weaving.

Square of cardboard -- to use as forms for weaving.

Baggies -- to put up small bags of clay so children
will not use up more clay than they need at
a time.

Daddies' old shirts -- smocks for children.

Hints to resource teachers: mix papier mache paste by putting water in bucket, first, then adding wheat powder until you get mixture the consistency of pancake batter. In mixing plaster of paris put plaster in first, then add water. Mix at last minute -- perhaps in old gallon plastic milk jug with part of top and side cut out. Mix plaster and water to thick consistency. Plaster of paris and plaster gauze molds take about twenty minutes to dry.

Paint for prints and silk screen should be two parts powder to one part water.

IV. What I have Learned

Building production centers is a good, non-threatening way to begin a mainstream project. The existence of the centers is a lesson in itself for classroom teachers. It says--there are many ways for children to learn; there are many ways for you to teach. The relationship between the project support teacher and the classroom teachers is a developing one. For the support teacher to help classroom teachers enrich classroom curriculum takes consummate tact, patience and time. But building production centers is something that can start as soon as the project children have been interviewed and their interests are known.

All that production centers demand of classroom teachers is that they send the children to use them. This has worked out well in Project ASCENT.

The Art Resource Center is probably the most successful of all Project ASCENT's endeavors this year. Children, teachers and parents alike have accepted it enthusiastically. A consensus already existed, before the project, that art was lacking in the curriculum.

The real, long-lasting success of the center will depend on whether the classroom teachers can see a way of integrating art into the everyday curriculum or even of using it as the integrating theme for the curriculum. One teacher is already letting her children build papier mache animals as an extension of a science unit. Will she also see that the experience is a mathematical lesson for children in measuring, proportion, mixing? Will she ever take time to teach in the center herself? A happy answer to these questions will depend on the openness of the classroom teacher and the skill of the project teacher in making change in the classroom seem both desirable and practical.

Some Helpful Books

Creative and Mental Growth by Viktor Lowenfeld and W. Lambert Brittain, sixth edition, Macmillan Publishing Co., New York.

Excellent basic book on how children develop, artistically as well as mentally, the role of school and teacher in encouraging creativity, the meaning of art in education.

Beginnings, the Nuffield Mathematics Project, John Murray, London, - the importance of picture, pattern and model making in forming such mathematical concepts as area, space, length, measurement, volume, counting, matching, comparison.

Creative Art for the Developing Child, A Teacher's Handbook for Early Childhood Education by Clare Cherry, Fearon Publishers, Belmont, California.

There are a lot of practical activities in this book, new ways of using traditional materials--for example--giving children oval paper instead of rectangular paper, asking them to paint on paper with holes in it.

Painting, Books I and II. Print Art. Paper Art.
By Everett E. Saunders, Whitman Publishing Co., Racine, Wisconsin.

Big full color pictures show how to do everything from gadget printing to paper folding to wrinkle etching.

Recipes for Art and Craft Materials, by Helen Roney Sattler, Lothrop, Lee & Shepard Co., New York.

If you have more time than money, these recipes for pastes, modeling compounds, casting compounds, ink, are great. I felt it was not worth my time this year to try any of them. Olive Kile swears by the recipe for finger paint Number Three on page 84 but suggests adding a tablespoon of glycerine.

Collage and Construction in Elementary and Junior High Schools by Lois Lord, Davis Publications, Worcester, Massachusetts.

The section on three-dimensional murals, wire sculpture by young children was amazing to me. Children would need more instruction to do these.



CREW ASSISTANTS

CHAPTER V

PARENTS AND COMMUNITY

Parents As Resources

There is a tremendous pool of resources available for gifted and talented programs in the parents of the children. Many times they are waiting to be asked to become involved in school activities. They are largely open-minded, supportive, and knowledgeable about the talents of their children. The parents helped transport and supervise students for field trips, contributed materials and equipment, manned learning centers, and conducted learning workshops for teachers and other parents (one drew the illustrations for the manual).

The project was explained to parents in the first meeting of the Parent-Teacher Organization in each school. At least one additional meeting was held in each school with all parents of the children in the project classrooms invited to attend. One hundred and twenty-four parents participated in these meetings. One group was from an affluent section of a large metropolitan area, one group was from the middle class section in a small town and the third from a lower middle class rural area. Occupations ranged from small farmer to professional and management positions. The responses of these three groups of parents to the question: "My child learns best when . . ." were remarkably similar, regardless of economic background.

The most frequently mentioned replies were: feels well or good (22), rewarded (20), interested (19), happy (10), good environment (9). These replies were very supportive of the goals of Project ASCENT.

Parents' replies to the request that they list their children's interests and special abilities were most revealing and helpful. Some of them follow:

1. Leadership qualities.
2. Is quite imaginative and creative.
3. Enjoys music and dancing (enjoys making up her own dance steps).
4. Has a beautiful way of communicating her feelings for others--although she is basically quite shy on first contact.
5. Expresses an interest in teaching--spends much time playing 'school.'

6. Enjoys reading and art.
7. Self-esteem appears quite healthy--is momentarily disappointed with mistakes or failures, but learns from these and still feels good about herself."

"My child seems to have an aptitude for math and science, and an ability to communicate easily with adults in a very mature way. I would enjoy seeing him develop a little more creativity on his own, and with others."

"I would like to see my children develop leadership abilities. Being able to communicate with others is very important. My child seems very interested in art and drawing. Music is also important to her right now. She has shown an interest in using reference material. She likes to look up some of the things she is learning about in school."

"I would like for my child to be more open, especially with adults."

"I would like for my child to have the chance to go to different places of historical interest. Also, art and music should be more important in school. I would like for my child to become more self-confident and sure of himself."

"-Ability to be comfortable with people. -Cultural experiences and exposure, i.e., arts, crafts, etc. -Enjoyment of reading."

"Work to beautify and enjoy school grounds - possibly planting flowers. Writing - creatively. Be more aware of meaning of our holidays - plays, stories, pictures, puppets."

"My child likes handcrafts - sewing, crocheting, knitting, musical instruments. She enjoys - playing basketball, twirling baton, cheerleading. She likes responsibility. She also has desire to help children that are less gifted than she. She requires a lot of affection."

"Things my child likes to do: draw, paint, play beauty shop with dolls, make anything with her hands such as sewing, etc."

Introductory Letter to Parents

Project ASCENT

September 3, 1976

Dear Parents:

Your child's school is one of three schools in North Carolina chosen to participate in a special pilot project. The goal is to discover better ways to identify gifted and talented children in the classroom and to develop a curriculum that will strengthen these gifts and talents without removing the child from the classroom setting. The regular classroom, because it is made up of many different kinds of children, offers the opportunity for the gifted children to learn and to relate to many kinds of people, to appreciate differences and develop leadership skills--lessons we do not want them to miss.

The pilot, called Project ASCENT, is aimed at children in kindergarten through third grade. Schools participating represent an urban setting (Beverly Woods), a rural setting (Norwood Elementary School in Stanly County) and a small town setting (Central Elementary School in Albemarle).

Sponsors of the project are the North Carolina State Department of Public Instruction, The University of North Carolina at Charlotte's College of Human Development and Learning, the Charlotte-Mecklenburg School System, the Albemarle City School System and the Stanly County School System.

Because the project is the only one of its kind, it is already receiving national attention, and this school is going to be visited by educators from many sections of the country.

I am the support teacher for the project. My job is to assist those classroom teachers who have chosen to participate in any way that I can. Your child's teacher has volunteered to participate, and I would like permission for your child to be a part of the project. I would also like permission for him/her to go on any field trips associated with this enriched learning experience. If you

have any questions, please do not hesitate to call or visit me at school.

Sincerely,

Support Teacher

I understand that Project ASCENT is to provide services to gifted and talented students and I give my permission for my child to participate.

(Parent)

I agree for my child to go on field trips associated with Project ASCENT.

(Parent)

Notice of Special Activity

BEVERLY WOODS ELEMENTARY SCHOOL
6001 Quail Hollow Road
Charlotte, North Carolina 28210

March 29, 1977

Dear Parents:

Project ASCENT will open an art resource center for the entire school next month. It will be a place where children can learn to express themselves in a variety of media--fingerpaints, papier mache, plaster of paris, clay, tempera paints, weaving, pottery and the like. We would like to keep it available to students as much as possible, and we will need adults to be there while the students work.

Would you like to be an art volunteer? You do not have to be artistically inclined. We will have two workshops for parents--one on the concept of the art resource center--the second on use of the materials.

The first workshop will be Monday, April 4, from 12:30 to 1:30 p.m. in the Media Center. Leader will be Irene Jahns, a parent who has been an elementary school art teacher. Irene is also planning the center with me and is writing a handbook about it for parent and teacher use.

If you can come to the workshop, would you please sign your name and have your child return the attached form to the homeroom teacher.

Sincerely yours,

Margaret Claiborne
Resource Teacher
Project ASCENT

MC/cnd

Attachment

cc: Ms. Irene Jahns

(Return this form to your child's homeroom teacher)

I am interested in being a volunteer for the art resource center. I plan to attend the workshop on April 4th, 12:30-1:30 p.m.

Name _____ My Child's Name _____

Date _____ My Child's Teacher _____

Letter for Parent Information and Permission

May 24, 1977

Dear Parents,

We have been studying a unit on machines in a group of 5 students. We are learning about the principles of wheels, levers, pulleys and inclined planes. As a follow-up activity we plan to visit Stanly Fixtures Manufacturing in Aquadale to see some things they make from wood.

Please sign giving your child permission to go on Friday afternoon, May 27. Miss Floyd will provide transportation.

(Parent's Signature)

Community Resources

The school cannot supply all the experiences needed by the gifted child. All resources of the community must be utilized. The school, with the help of parents, must provide leadership in identifying and making the resources available. In every community there are adults with special abilities and talents ready and willing to contribute to expansion of the school curriculum.

Project ASCENT personnel found many resources which were unknown or untapped previously. All resources within the school system, such as specialists in science, media production, physical education, art and music, were used when possible.

Community resources such as museums, zoos, parks, wooded areas, cemeteries, places of business, materials production centers, private homes, industrial plants, and historical places of interest were all used to stimulate and enrich studies begun in the classroom.

Parent Involvement

Curriculum for students can be immeasurably enriched if parents are encouraged at the beginning of the year to be on the lookout for good field trips for the class, and to share their talents.

Tom Ellison is a chemist. Together he and his son, Matt, built a small "volcano" out of cement, mounted on a wooden board. The volcano was allowed to dry, then painted, then brought to school. Mr. Ellison visited the class one day and put a square of paper in the volcano's center, then sprinkled a little Ammonium Dichromate powder in the bottom. He lit the corner of the paper, and, presto! We had an erupting volcano, complete with sparks and smoke. If Ammonium Dichromate is not available at a science hobby store of chemical company, try a combination of soda and vinegar. (Ammonium Dichromate is available in Charlotte through classroom teachers who can purchase it from Reagents, Inc.)

Sharrell Treat is a former teacher who is especially good at thinking of unusual field trips. This year she was responsible for telling us about Dora Dunlop, the ninety-five-year-old woman who grew up on a cattle ranch in Montana. She also told us about a prehistoric rock formation on a farm in Mecklenburg County. The project

teacher got permission for the class to visit it, and asked Charles Vizzini, the science curriculum developer for the Charlotte-Mecklenburg Schools, to go along and tell the class something about the rocks. Another time, Mrs. Treat encouraged a class to visit the York County Nature Museum in Rock Hill, South Carolina, where there is a rich collection of stuffed animals, mostly from Africa, in beautiful and accurate settings. The class also visited the private museum of a Rock Hill resident whose father had collected many Catawba Indian artifacts from nearby fields and river banks.

Living History - Right in the Neighborhood

When a third grade was studying Indians and the West, two students visited Dora Dunlop, a ninety-five-year-old woman who grew up on a cattle ranch in Montana. The girls learned to operate a tape recorder before the interview, thus were able to record, in the woman's own words, what it was like to have a steam boat captain for a father, how hard and wonderful a child's life was on a ranch, seventy or eighty years ago, what it was like to have Crow Indians for friends, what a difference the inventions of electricity and cars made in her life.

When the students came back to school, they set up a listening center where other students could hear the interview. They made a small model of Mrs. Dunlop's ranch as she described it, and they put some of Mrs. Dunlop's mementos in the center.

Students could interview their own parents and grandparents. Life is changing so quickly, they might be surprised at how different the childhoods of their parents were from their own.

Short Changed

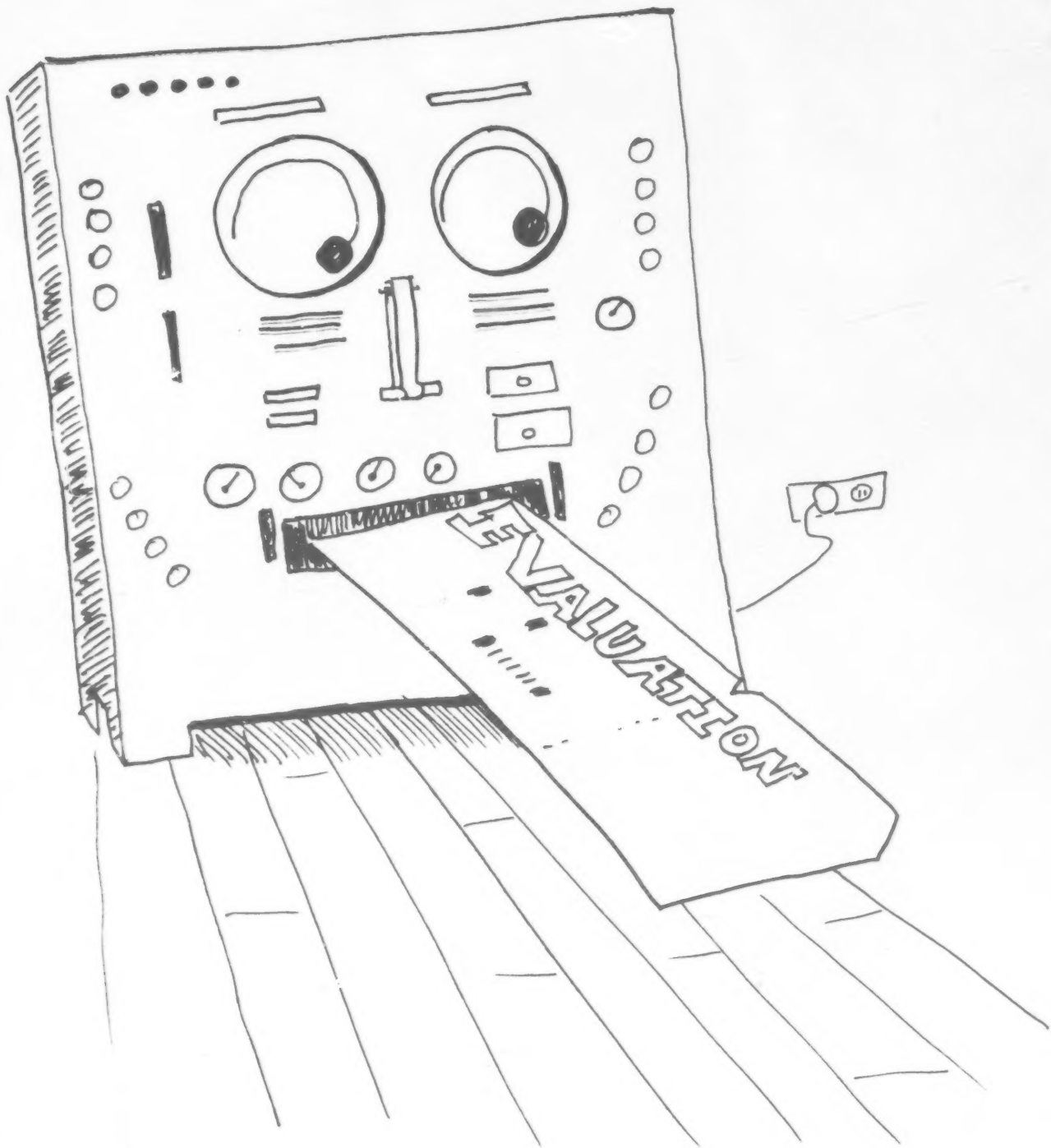
A group of second graders, who had studied money, went to a local bakery to purchase their choice of a "sweet." They had to make their own transactions with paying and counting change. The teacher arranged in advance to have incorrect change given -- excitement and a great learning experience.

Local Cemetery

After studying texture in art and exploring the school grounds for various textures, third graders went to a nearby cemetery to make rubbings of tombstones. Questions about death and history arose and led to many other interests and activities. Who knows what learning lurks in the local cemetery?

Spend the Night

A kindergarten teacher looking for new experiences for his students decided on an overnight camping trip in a large campsite ten miles away. Fathers erected tents, mothers helped cook and the children worked and learned in the out-of-doors. Nature hikes, fishing, swimming, boating, crafts, cooking and campfire singing brought joy and excitement in learning. Sleeping together, away from home - many for the first time - was an experience in group living which can never be equaled in a classroom. Results - happy, more mature kindergartners.



CHAPTER VI

EVALUATION

Purpose of Evaluation

The proposed design of Project ASCENT specified the development of evaluation to determine the effects of the project on teachers and students. Project ASCENT personnel designed an evaluation procedure to analyze some of the designated outcomes of the first year of the project. The purpose of the evaluation was to develop activities that could determine the effect of in-service training on staff of schools involved in Project ASCENT and to record teacher attitude changes toward members of their classes who had been identified as gifted and/or talented students.

Design

The evaluation design compares experimental schools with control schools to determine the change in attitude of teachers toward child centered or "progressive" education by a pre and post testing on the Kerlinger Education VI scales. In addition, teacher perception of student's gifts and talents are assessed in control and experimental schools on a pre and post basis using the Renzulli-Hartman Scale for Rating Behavior Characteristics of Superior Students (SRBCSS). The format of the testing would be:

	Pre test	Post test
Control	SRBCSS Educational Scale VI	SRBCSS Educational Scale VI
Experimental	SRBCSS Educational Scale VI	SRBCSS Educational Scale VI

Other information would be gathered on the classrooms by project staff for support. This information would include anecdotal records and child interviews. Specifically, the evaluation study would answer the following questions:

1. Have the experimental teacher's perceptions of the students identified early in the year changed during the year?
2. Have the control teacher's attitudes changed toward their identified children during the year?
3. Is there a significant difference between the control and experimental teachers in the original identification, post test identification or change in identification?
4. Were experimental and control teacher's attitudes significantly different on the pre test, post tests or changes in the tests?
5. Does other data collected by project staff (anecdotal records and child interviews) support the findings of the testing procedure?

Sample

The sample for the evaluation study was based on the broad intent of the original project and reflects the rural, small city, and metropolitan areas that the project encompasses. Each school district selected an elementary school that included a K-3 program that would form the basis for the early childhood gifted and talented program. Each district then selected a control school based on the same socioeconomic and racial background. After the sites were selected by the school district, each school principal asked for volunteers for participation in the project. At least eight (8) teachers and their classrooms were selected from each of the three (3) project schools chosen to reflect the rural, small city, and metropolitan area. The control schools selected their teachers and students in an identical manner. After the populations were selected, six (6) gifted and talented students were chosen for each teacher, representing a cross section of race and sex.

Finally, twenty (20) students were randomly selected from each school with at least one student from each class. The procedure is represented in the table below

EXPERIMENTAL SCHOOLS

	Total Teachers	Project Teachers	Students	Nominated GT Students	Selected GT Students
Rural	25	8	200	48	20
Small City	18	11	200	66	20
Urban	25	8	200	48	20

CONTROL SCHOOLS

Rural	24	8	200	48	20
Small City	16	8	200	48	20
Urban	16	8	200	48	20

The selection constraints for the students then were statistical represented male/female, race, one student per class and a selection of 10 percent gifted and talented students.

Procedure

The sample teachers were trained in the use of the SRBCSS and were asked to take the Kerlinger ESVII at the same time. After the initial training, the experimental teachers received training to work with gifted and talented students in the mainstream. Included in their training were sessions on Creativity, Talent Development, Development of Self-Concept, Personal Growth, Curriculum Materials, Identification of Gifted and Talented Students. In addition, they received on-site aid from the support teachers and the project director.

After the year's work and training the SRBCSS and Kerlinger ESVII were re-administered to students and teachers in the control and experimental schools.

Instruments

The instruments used in the study were the Hartman-Renzulli (SRBCSS) Scales, Kerlinger Educational Scales, an adaptation of the child interviews developed by Dr. Roberta D. Riley, and anecdotal records. Renzulli-Hartman Scales for Rating Behavioral Characteristics of Superior Students are an objective and systematic instrument for guiding teacher judgment in the identification process through constructed criteria. Subscores are considered the method of identification. They were developed for use with students grades four (4) through twelve (12). The Kerlinger ESVII is a measure of teacher attitude toward educational practices and policies. It is a bi-polar system that gives a teacher-based or traditional score and a progressive or child-center score. Child Interview permits the child to discuss activities and decision processes that occur in the classroom. The instrument is a method to determine the present state of control and permission within the classroom and the degree of freedom permitted the students in the class.

Limits of the Study

The study has limits which effect the validity of the outcomes and generalizability of the research. The structure of the sampling places constraints on the program's ability to get clear results. Since there is the intention to develop a statistically different population, the degree of constraints placed by the selection process will reduce this effect. The sample was constrained by the necessity of picking sex, race, classroom, and school populations regardless of their potential effect on the outcomes. It has been noted in studies that these constraints could have effect on the differentiated sample. In addition, the time and shifting of staff within the project could have some effect on the outcomes. The project did not begin until September of 1977. The evaluation had to be designed, the instruments obtained, and the testing done by project personnel as no other staff or funds were available for the implementation of the evaluation. The classroom staff was shifted during the project with one school losing three (3) teachers and gaining three (3) other teachers. Finally, the staff of the project and the teachers were being

trained during the time that the evaluation was developed. This effects the study in two (2) ways. Primarily, the staff is not trained in the philosophy of the program and, therefore, is responding to questions, forms, and content with less than a full understanding of the program. At the same time they identify the students for the project. These limits do not aid the development of statistical measures to support findings.

Analysis of Data

The analysis of data will be computed by T-test for significant difference between the control and experimental groups. Tests for significant gains will be made between the pre and post test within a group. Analysis of supporting data will be developed to determine the impact on classroom activities and student perception.

Standardized Achievement and I.Q. Tests

Children nominated for their ability in academic learning on the Renzulli-Hartman Scale were further screened by use of existing standardized tests. Stanines of seven or above on achievement in one or more major subject areas and I.Q. qualified them for the program. There was a desire on the part of the project staff not to subject the children to further formal testing.

Informal Evaluation

Samples of work were collected periodically and filed in individual folders for the identified children. Anecdotal records were kept by support teachers and served as a basis for recording activities on Student Activity Record for each identified student. Schedule for Learning Activities were jointly used by classroom and support teachers to assure that project goals were being met in the classroom.

PROJECT ASCENT
STUDENT ACTIVITY RECORD

1976-77 1977-78

Name John Doe Special Interest Science, History
 School _____ Talent(s) Leadership, academic
 Teacher _____ learning

Activities

Self-Concept	Creativity	Special Interest	Talent(s)
Saw movie, "Free to Be You and Me," with class; discussed it. There is a center on "feelings" in classroom that John has used. I gave John's parents a book written for parents and children on dying when one of John's friends became terminally ill.	Participated in brainstorming for science studies and center - also, in brainstorming a production center in The Media Center where students may choose variety of ways (recording, filmstrips) to make reports. John worked with his father to develop a "volcano model" that would really erupt.	He helped work on a papier mache dinosaur made in Art Resource Center - an extension of science unit. He acted the voice of the dinosaur in a play the children wrote. He went on a field trip to gather specimens for project terrarium-developed second terrarium on his own to house a green snake.	John led a school assembly in which children interviewed a children's author, Carolyn Haywood, over telephone, loud-speaker system; he went on project field trip to gather micro-organisms-did extra 4-page paper on "good" and "bad" bacteria which was videotaped along with live specimens - John's very concerned about values good & bad

These suggestions may help in listing the activities on the identified children's forms. Of course, these will vary with each child and the activities in his class - be as specific as possible.

Self-Concept

Group Counseling
Individual Counseling
Successful interaction with peers through family grouping
Self-expression in art, drama, music
Choices in activities and materials
Valuing children's products
Recognition of individual differences
Praise and rewards for efforts
Free play

Creativity

Stimulating experiences in art, drama, music, literature, science
Opportunities to explore, manipulate materials
Encouragement of questions
Open-ended activities
Brainstorming, problem-solving techniques
Creative writing
Awareness of senses training
Time to follow interests
Resources outside classroom - field trips, speakers, museums, movies, drama
Choices of activities
Praise and recognition of creative efforts
Free play

PROJECT ASCENT

Classroom Teacher _____

Month _____

Schedule of Learning Activities

(Used for Classroom Teacher-Support Teacher Joint Planning Sessions)

	1st Week		2nd Week		3rd Week		4th Week	
Objective 1 Children will make choices in what tasks and materials they will use. (Learning centers, exploration)	Now doing	Time	Now doing	Time	Now doing	Time	Now doing	Time
	Will do	Time	Will do	Time	Will do	Time	Will do	Time

PROJECT ASCENT (Continued)

	1st Week		2nd Week		3rd Week		4th Week	
Objective 2	Now doing	Time	Now doing	Time	Now doing	Time	Now doing	Time
Children will interact with others in the environment through expression of thoughts and feelings. (Small group discussion, role playing, free play)								
	Will do	Time	Will do	Time	Will do	Time	Will do	Time

PROJECT ASCENT (Continued)

	1st Week		2nd Week		3rd Week		4th Week	
Objective 3 Children will explore their interests and proceed at their own rate. (Child developed interest centers)	Now doing	Time	Now doing	Time	Now doing	Time	Now doing	Time
	Will do	Time	Will do	Time	Will do	Time	Will do	Time

PROJECT ASCENT (Continued)

	1st Week		2nd Week		3rd Week		4th Week	
Objective 4	Now doing	Time	Now doing	Time	Now doing	Time	Now doing	Time
Children will collaborate and share freely with others in the learning environments. (Peer teaching, group sharing, free play)								
	Will do	Time	Will do	Time	Will do	Time	Will do	Time